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ABSTRACT

Data on the characteristics of scientists and engineers employed by approximately 2,190 higher education institutions and from 19 university-administered federally-funded research and development institutions are presented. These data, derived from the National Science Foundation's 1983 Survey of Scientific and Engineering Personnel Employed at Universities and Colleges are presented in 81 tables under these headings: (1) trends; (2) sex; (3) institutional control and full-time equivalents; (4) institutional rankings; (5) the top 100 doctorate-granting institutions; (6) institutional rankings by sex and type of employment; (7) geographic distribution; (8) type of institution; (9) historically black colleges; and (10) institutional categories. Data within these categories are broken down, when applicable, by sex, science and engineering field, full-time and part-time employment equivalent, status, and other variables. Sixteen summary tables are also presented, providing data by type of public or private doctorate-, master's-, or bachelor's-granting institution for the various science and engineering fields. A sample questionnaire, instructions, and related materials are appended. (JN)

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academic science/engineering: scientists and engineers, january 1983

surveys of science resources series
national science foundation

detailed statistical tables

NSF 84-309

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To obtain accurate historical data, use only the latest detailed statistical tables for January 1983 (NSF 84-309) and not data published earlier. Institutions revise prior-year data when important changes occur in reporting practices and program classifications, and only the latest tables incorporate such changes.

general notes

The data presented in this publication are derived from the National Science Foundation's (NSF's) Survey of Scientific and Engineering Personnel Employed at Universities and Colleges, January 1983. A *Science Resources Studies Highlights* (NSF 84-000) analyzing the results of this survey will be published at a later date.

The tables included here present statistics on the characteristics of scientists and engineers employed by institutions of higher education; data from university-administered federally funded research and development centers (FFRDC's) are tabulated separately.

The terms "imputation" and "imputed data" refer to the computerized process of developing estimates of data that were not furnished by the institutions concerned when such statistics were requested. This process develops estimates based primarily on key data items reported in prior-years' surveys when available; when not available, estimates were based on figures derived according to peer respondent institutions' characteristics, which in turn were based on highest degree granted and type of institutional control—public or private. Corresponding items are increased or decreased to reflect growth or shrinkage experiences by similar peer institutions. In these tabulations the letter "I" is used to identify imputed data and the letter "E" is used when respondent institutions indicated that their data required slight adjustments in order to distribute them consistently.

Every effort was made to maintain close contact with repondents to preserve the consistency and continuity of the resultant data. The completed 1983 questionnaires were carefully examined upon receipt by NSF. A computerized facsimile of the survey form was then prepared for each institution, depicting a 2-year comparison of its responses including the current-year's data, and noting substantive disparities, if any. The facsimiles were mailed to all doctorate- and master's-granting institutions and to all other institutions whose data required corrections so that updating could be accomplished before the final processing and tabulation by the contractor.

Data presented in trend tables are assembled from the most recently completed survey cycle. Since prior-years' data are reviewed for consistency with current-years' responses and, when necessary, revised in consultation with institutional respondents, reference to prior-years' data should be restricted to this document.

The category "doctorate-granting institutions" in this report refers to two groupings of universities. The first is based on the conventional degree-level distinction—doctorate, master's, bachelor's, and no science/engineering degree. Most of the data on doctorate-granting institutions shown in this report are based on this conventional classification system. A second system developed by the National Center for Education Statistics (NCES), uses the "doctorate-granting institutions" category in reference to institutions characterized by a significant emphasis on doctorate-level education, as measured by the number of doctorate recipients and by the diversity in doctorate-program offerings. The number of institutions included under the conventional "doctorate-granting" category is 328, the number included under the NCES category is 165.

Four additional categories of institutions appear in the NCES classification system: "Comprehensive," "general baccalaureate," "professional and specialized," and "2-year." "Comprehensive" institutions are characterized by a strong, diverse post-baccalaureate program but are not typically involved in doctorate-level education. "General baccalaureate" institutions are primarily engaged in general undergraduate, baccalaureate education. "Professional and specialized" institutions may be baccalaureate or postbaccalaureate and are characterized by a significant level of specialization in one area, usually a professional field such as business or engineering. "Professional and specialized" schools are listed as one of the following: Dentistry; medical; other health; engineering; business and management; art, music and design; law; education; U.S. service; and other specialized or professional. "Two-year" institutions confer over three-fourths of their degrees for two years of study.

See section A, technical notes, for a detailed description of the survey universe, methodology, and limitations of the data; section B for the statistical tables; section C for the survey summary data; section D for the university-administered FFRDC's; and section E for reproductions of the cover letter, questionnaire, and instructions.

Requests for additional information concerning the survey findings and for data tapes for the 1983 and prior survey years should be directed to Ms. Judith F. Coakley or Ms. Esther Gist at the following address:

Universities and Nonprofit
Institutions Studies Group
Division of Science Resources Studies
National Science Foundation
Washington, D.C. 20550
(202) 634-4673

section a

technical notes

scope of survey

This survey covers professional employment of scientists and engineers at all academic institutions with at least one science or engineering (S/E) program. Survey questionnaires were mailed in January 1983 to more than 2,200 institutions of higher education and their 19 university-administered federally funded research and development centers (FFRDC's). To qualify as an FFRDC, the center must be engaged in basic or applied research, development, or management of research and development (R&D) activities, and monitored directly by the Federal Government, usually by a single agency; this relationship is expected to be maintained on a long-term basis. An FFRDC must operate separately from its administrative organization or be incorporated separately. With an average annual budget of at least $500,000 for operating expenses and capital equipment, 70 percent of which is Federal support, the center's facilities are owned or funded under contract by the Federal Government.

The survey universe included all institutions of higher education, including 2-year institutions, that are identified by the National Science Foundation (NSF) as offering S/E degree-credit courses. The survey excluded schools of art, education, music, law, and theology, and all others that do not employ scientists or engineers.

The survey population was reviewed prior to the mailout of the questionnaires to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine if changes had occurred (i.e., reviewed for changes in highest degree granted or for school openings, closings, or mergers). Names of institutions newly added to the *Education Directory, Colleges and Universities, 1981-82 and 1982-83 Supplement*[1] were reviewed to determine their eligibility for inclusion in this survey.

At the time of survey closeout in late August 1983, 2,190 universities and colleges and their 19 university-associated FFRDC's constituted the universe. Of the survey's academic institutions, 1,284, or 59 percent, responded, compared with a 61-percent response rate in 1982. Table A-1 shows the distribution of responses by degree level of the institutions surveyed. Estimates for nonrespondent institutions represented approximately 21 percent of the total number of scientists and engineers employed in higher education institutions. Response rates for 2-year institutions and all other institutions that do not award at least one S/E degree are included with totals from bachelor's degree-granting institutions. Of the doctorate-granting institutions surveyed, 82 percent responded, about 7 percentage points lower than the 1982 survey. These 328 doctorate-granting

[1] Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1981-82* (NCES 82-306) and *1982-83 Supplement* (Washington, D.C.: Supt. of Documents, U.S. Government Printing Office).

Table A-1. Science/engineering (S/E) personnel survey response rates by type of institution: January 1983

Type of institution	Number surveyed	Number of respondents	Percent of total
Total	2,190	1,284	58.6
Doctorate	328	269	82.0
Master's	310	207	66.7
Bachelor's and no S/E degree	1,552	808	52.1

SOURCE: National Science Foundation

institutions accounted for approximately two-thirds of all academic scientists and engineers. The response rate for master's-granting institutions, 67 percent, was up 3 percentage points compared to 1982; responses from the category of bachelor's- and non-S/E-degree institutions dropped 3 percentage points to 52 percent.

survey items

The questionnaire used in the January 1983 survey was basically unchanged from that used in 1982. The "crosswalk" added in 1982 is now included routinely to assist respondents in matching the S/E fields referred to in this survey with the field codes devised by the National Center for Education Statistics (NCES) of the Department of Education. The NCES field codes are published in *A Classification of Instructional Programs* (NCES 81-323).

The survey questionnaire consists of three main items: Item 1 requests headcount data on the number of scientists and engineers by highest earned degree; item 2 collects headcount data by detailed S/E field, sex, and employment status (full- or part-time); and item 3 requests information on total full-time-equivalents by detailed S/E field as well as full-time-equivalents engaged in research and development.

estimates for nonresponse

In order to provide national totals of academic S/E employment, estimates were made for institutions that failed to respond to the survey. Imputed data for individual institutions were based primarily on key items reported or estimated in earlier surveys. Totals for these institutions were increased or decreased according to overall rates of fluctuations for institutions at the same degree level and under the same type of control (public or private). Detailed computer-generated imputations were then made on the basis of distributions computed for similar institutions. This estimating process, referred to as "imputation," has been used consistently since 1977.

The combined imputed and estimated amounts totaled about 76,600 scientists and engineers employed by academic institutions, or 21 percent of the 358,800 total. This compared to a 22-percent imputation rate in 1982. Table A-2 shows imputed and estimated amounts for the 1983 survey by field, employment status, and type of activity. Imputation rates generally increased across all major fields.

The highest imputation rates occurred for psychologists and mathematical/computer scientists, about 31 percent and 28 percent, respectively, each up slightly over 1982

Table A-2. Science/engineering personnel survey imputed and estimated amounts by field, employment status and activity: January 1983

Disciplines	Total	Full time	Part time	Total FTE's[1]	FTE's devoted to separately budgeted R&D activities
Scientists and engineers, total	76,643	51,678	25,030	77,937	10,224
Engineers, total	7,160	4,632	2,518	6,941	1,401
Aeronautical & astronautical engineers	208	152	56	216	84
Chemical engineers	311	233	78	326	119
Civil engineers	1,081	733	352	1,108	172
Electrical engineers	2,080	1,303	777	1,913	274
Mechanical engineers	1,498	996	509	1,403	170
Other engineers	2,047	1,261	785	1,975	583
Physical scientists, total	8,524	6,409	2,072	8,328	1,358
Astronomers	162	93	68	161	35
Chemists	4,783	3,585	1,194	4,030	666
Physicists	3,064	2,367	676	3,080	582
Other physical scientists	498	364	134	458	75
Environmental scientists, total	1,635	1,244	387	1,690	333
Atmospheric scientists	108	61	47	89	40
Earth scientists	1,241	964	276	1,284	205
Oceanographers	159	128	30	151	63
Other environmental scientists	170	129	41	166	25
Mathematical/computer scientists, total	12,804	7,167	5,615	10,892	464
Mathematicians	9,481	5,486	3,974	8,160	253
Computer scientists	3,323	1,681	1,641	2,732	211
Life scientists, total	23,119	17,129	5,959	24,555	5,532
Agricultural scientists	1,804	1,394	410	2,859	661
Biological scientists	9,967	7,780	2,185	10,016	2,224
Medical scientists	9,196	6,456	2,726	9,189	2,435
Other life scientists	2,109	1,459	637	2,151	212
Psychologists, total	7,285	4,419	2,859	6,314	396
Social scientists, total	14,326	9,106	5,159	12,954	727
Economists	3,686	2,257	1,411	3,312	229
Political scientists	3,225	2,240	98	3,016	144
Sociologists	4,243	2,720	1,521	3,861	164
Other social scientists	3,171	1,907	1,254	2,858	190

[1] Full-time-equivalents.

SOURCE: National Science Foundation

rates (table A-3). The lowest imputation rate, life scientists at 15 percent, was about the same as the 1982 rate.

The imputation rate for the total number of full-time-equivalent (FTE) scientists and engineers engaged in separately budgeted R&D activities fell 5 percentage points in 1983 to 17 percent, accounting for only 10,000 out of the 60,300 total (table A-3). This rate represents a considerable improvement over institutions' prior reporting efforts regarding this portion of item 3.

For detailed studies of individual institutional responses, the reader should obtain a *Data User Guide* from J. G. Huckenpahler, at the same address as indicated in the general notes, or refer to tables in section B beginning with table B-39.

Table A-3. Science/engineering (S/E) personnel survey imputed and estimated amounts by field: January 1983

Disciplines	All S/E employment			Full-time-equivalents devoted to R&D activities		
	Total	Amount imputed and/or estimated	Percent of total	Total	Amount imputed and/or estimated	Percent of total
Total	358,824	76,643	21.4	60,266	10,244	17.0
Engineers	37,696	7,160	19.0	7,055	1,401	19.9
Physical scientists	34,660	8,524	24.6	7,059	1,358	19.2
Environmental scientists	10,144	1,635	16.1	3,033	333	11.0
Mathematical/computer scientists	45,639	12,804	28.1	2,195	464	21.1
Life scientists	151,524	23,119	15.3	35,847	5,532	15.4
Psychologists	23,695	7,285	30.7	1,463	396	27.1
Social scientists	55,466	14,326	25.8	3,614	727	20.1

SOURCE: National Science Foundation

section b

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TABLE B-1. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND STATUS: SELECTED YEARS

FIELD AND STATUS	1967	1969	1971	1973	1975	1977	1978	1980	1981	1982	1983
ALL FIELDS	212,855	231,756	257,904	264,887	278,919	297,856	307,757	324,249	334,487	349,310	358,824
FULL TIME	170,557	187,082	209,416	216,424	223,336	236,278	242,170	254,990	259,696	267,771	272,955
PART TIME	42,298	44,674	48,488	48,463	55,583	61,578	65,587	69,259	74,791	81,539	85,869
ENGINEERS	25,253	25,387	27,130	27,530	27,919	30,083	30,997	33,737	34,840	36,335	37,696
FULL TIME	20,983	21,431	23,039	23,485	22,580	24,105	24,666	26,472	27,017	27,950	28,816
PART TIME	4,270	3,956	4,091	4,045	5,339	5,978	6,331	7,265	7,823	8,385	8,880
PHYSICAL SCIENTISTS	26,243	28,149	29,443	30,210	30,836	32,120	32,839	33,554	34,069	34,463	34,660
FULL TIME	23,361	25,040	26,346	26,666	26,662	27,553	27,902	27,993	28,178	28,538	28,376
PART TIME	2,882	3,109	3,097	3,544	4,174	4,567	4,937	5,561	5,891	5,925	6,284
ENVIRONMENTAL SCIENTISTS	5,111	5,549	6,500	6,934	7,855	9,337	9,618	9,960	10,183	10,195	10,144
FULL TIME	4,294	4,935	5,752	6,091	6,787	8,075	8,285	8,453	8,678	8,668	8,688
PART TIME	817	614	748	843	1,068	1,262	1,333	1,507	1,505	1,527	1,456
MATHEMATICAL AND COMPUTER SCIENTISTS	17,776	22,495	24,548	24,770	28,475	31,996	33,034	35,957	38,986	42,297	45,639
FULL TIME	14,397	18,390	20,282	20,794	22,404	23,870	24,349	26,030	27,127	28,380	29,893
PART TIME	3,379	4,105	4,266	3,976	6,071	8,126	8,685	9,927	11,859	13,917	15,746
LIFE SCIENTISTS	87,347	97,206	110,274	112,352	113,466	117,441	122,956	133,702	137,773	146,337	151,524
FULL TIME	66,620	74,882	85,907	88,418	90,684	94,306	97,726	108,155	110,567	115,711	118,868
PART TIME	20,727	22,324	24,367	23,934	22,782	23,135	25,230	25,547	27,206	30,626	32,656
PSYCHOLOGISTS	11,358	14,780	16,806	18,876	21,649	23,699	23,752	23,257	23,386	23,697	23,695
FULL TIME	8,554	11,536	12,994	14,777	15,973	17,307	17,406	16,733	16,859	16,796	16,788
PART TIME	2,804	3,244	3,812	4,099	5,676	6,392	6,346	6,524	6,527	6,901	6,907
SOCIAL SCIENTISTS	39,767	38,190	43,203	44,215	48,719	53,180	54,561	54,082	55,250	55,986	55,466
FULL TIME	32,348	30,868	35,096	36,193	38,246	41,062	41,836	41,154	41,270	41,728	41,526
PART TIME	7,419	7,322	8,107	8,022	10,473	12,118	12,725	12,928	13,980	14,258	13,940

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-2. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY TYPE OF INSTITUTION AND STATUS: SELECTED YEARS

TYPE OF INSTITUTION AND STATUS	1967	1969	1971	1973	1975	1977	1978	1980	1981	1982	1983
ALL INSTITUTIONS	212,855	231,756	257,904	264,887	278,919	297,856	307,757	324,249	334,487	349,310	358,824
FULL TIME	170,557	187,082	209,416	216,424	223,336	236,278	242,170	254,990	259,696	267,771	272,955
PART TIME	42,298	44,674	48,488	48,463	55,583	61,578	65,587	69,259	74,791	81,539	85,869
INSTITUTIONS GRANTING:											
DOCTORATE IN S&E	142,676	154,424	171,238	174,474	180,330	193,204	200,366	218,021	223,832	232,043	236,560
FULL TIME	114,446	124,604	140,339	143,393	148,096	159,848	164,732	179,775	183,160	188,742	191,731
PART TIME	28,230	29,820	30,899	31,081	32,234	33,356	35,634	38,246	40,672	43,301	44,829
MASTER'S IN S&E	24,729	29,441	30,080	28,703	34,075	34,790	38,628	37,362	37,856	38,918	40,545
FULL TIME	20,748	25,212	25,597	24,851	27,511	27,118	29,395	27,915	27,940	28,620	29,618
PART TIME	3,981	4,229	4,483	3,852	6,564	7,672	9,233	9,447	9,916	10,298	10,927
BACHELOR'S IN S&E	23,025	21,690	23,198	28,363	27,113	27,411	26,222	26,830	27,608	28,815	29,469
FULL TIME	19,328	17,927	19,623	23,620	22,406	22,437	21,165	20,784	21,229	21,646	22,219
PART TIME	3,697	3,763	3,575	4,743	4,707	4,974	5,057	6,046	6,379	7,169	7,250
NONSCIENCE DEGREES 1/	22,425	26,201	33,388	1,348	1,345	607	858	842	916	687	610
FULL TIME	16,035	19,339	23,857	812	828	467	705	680	708	579	489
PART TIME	6,390	6,862	9,531	536	517	140	153	162	208	108	121
2-YEAR INSTITUTIONS	-	-	-	31,999	36,056	41,844	41,683	41,194	44,275	48,647	51,640
FULL TIME	-	-	-	23,748	24,495	26,408	26,173	25,836	26,659	28,184	28,898
PART TIME	-	-	-	8,251	11,561	15,436	15,510	15,358	17,616	20,663	22,742

1/ DATA FOR 1967 THROUGH 1971 INCLUDE 2-YEAR INSTITUTIONS AS WELL AS INSTITUTIONS AWARDING DEGREES IN NONSCIENCE FIELDS.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-3. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY INSTITUTIONAL CONTROL AND TYPE OF ACTIVITY: SELECTED YEARS

TYPE OF ACTIVITY AND CONTROL	1969	1971	1973	1975	1977	1978	1982	1983
TOTAL FTE'S	203,937	228,216	235,050	243,071	258,041	271,656	299,705	305,447
RESEARCH AND DEVELOPMENT	50,146	49,499	46,896	50,926	54,243	55,962	59,473	60,265
OTHER ACTIVITIES	153,791	178,717	188,154	192,145	203,798	215,694	240,232	245,182
TYPE OF CONTROL:								
PUBLIC INSTITUTIONS								
TOTAL FTE'S	-	-	157,510	168,900	179,933	187,868	207,856	211,610
RESEARCH AND DEVELOPMENT	-	-	27,512	31,186	34,255	34,991	37,595	38,862
OTHER ACTIVITIES	-	-	129,998	137,714	145,678	152,877	170,261	172,748
PRIVATE INSTITUTIONS								
TOTAL FTE'S	-	-	77,540	74,171	78,108	83,788	91,849	93,837
RESEARCH AND DEVELOPMENT	-	-	19,384	19,740	19,988	20,971	21,878	21,403
OTHER ACTIVITIES	-	-	58,156	54,431	58,120	62,817	69,971	72,434

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-4. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	288,322	297,856	307,757	324,249	334,487	349,310	358,824
ENGINEERS	28,495	30,083	30,997	33,737	34,840	36,335	37,696
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,133	1,144	1,132	1,407	1,262	1,323	1,330
CHEMICAL ENGINEERS	1,861	1,924	1,999	2,352	2,283	2,263	2,417
CIVIL ENGINEERS	5,032	5,161	5,366	5,529	5,716	6,091	6,375
ELECTRICAL ENGINEERS	6,932	6,929	7,199	8,154	8,583	9,036	9,598
MECHANICAL ENGINEERS	5,302	5,490	5,651	6,074	6,323	6,637	6,731
OTHER ENGINEERS	8,235	9,435	9,650	10,221	10,673	10,985	11,245
PHYSICAL SCIENTISTS	31,427	32,120	32,839	33,554	34,069	34,463	34,660
ASTRONOMERS 2/	-	-	-	955	1,065	1,203	1,071
CHEMISTS	16,581	17,120	17,664	17,614	18,087	18,028	18,242
PHYSICISTS	12,198	12,482	12,778	13,007	12,914	13,268	13,551
OTHER PHYSICAL SCIENTISTS	2,648	2,518	2,397	1,978	2,003	1,964	1,796
ENVIRONMENTAL SCIENTISTS	8,566	9,337	9,618	9,960	10,183	10,195	10,144
ATMOSPHERIC SCIENTISTS	720	785	962	943	918	886	1,064
EARTH SCIENTISTS	6,494	6,945	6,987	6,569	6,634	6,678	6,531
OCEANOGRAPHERS	1,352	1,607	1,669	1,663	1,731	1,640	1,679
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	785	900	991	870
MATHEMATICAL AND COMPUTER SCIENTISTS	29,916	31,996	33,034	35,957	38,986	42,297	45,639
MATHEMATICIANS	24,137	25,439	25,993	27,079	28,578	29,943	31,303
COMPUTER SCIENTISTS	5,779	6,557	7,041	8,878	10,408	12,354	14,336
LIFE SCIENTISTS	114,582	117,441	122,956	133,702	137,773	146,337	151,524
AGRICULTURAL SCIENTISTS	14,181	14,362	15,022	15,899	16,128	16,445	16,599
BIOLOGICAL SCIENTISTS	40,025	42,618	43,597	44,803	46,351	46,739	47,881
MEDICAL SCIENTISTS	60,376	60,461	64,337	67,116	68,625	72,987	74,915
OTHER LIFE SCIENTISTS 2/	-	-	-	5,884	6,669	10,166	12,129
PSYCHOLOGISTS	22,925	23,699	23,752	23,257	23,386	23,697	23,695
SOCIAL SCIENTISTS	52,411	53,180	54,561	54,082	55,250	55,986	55,466
ECONOMISTS	13,133	13,865	14,087	14,672	15,077	15,455	15,550
POLITICAL SCIENTISTS	11,343	11,216	11,352	11,194	11,574	11,832	11,803
SOCIOLOGISTS	15,182	15,538	15,409	14,501	14,688	14,638	14,180
OTHER SOCIAL SCIENTISTS	12,753	12,561	13,713	13,715	13,911	14,061	13,933

1/ DATA HERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-5. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	229,886	236,278	242,170	254,990	259,696	267,771	272,955
ENGINEERS	22,924	24,105	24,666	26,472	27,017	27,950	28,816
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	966	968	964	1,144	1,057	1,084	1,091
CHEMICAL ENGINEERS	1,638	1,684	1,725	1,886	1,902	1,910	1,952
CIVIL ENGINEERS	4,015	4,111	4,240	4,325	4,446	4,739	4,989
ELECTRICAL ENGINEERS	5,405	5,463	5,593	6,374	6,518	6,789	7,171
MECHANICAL ENGINEERS	4,346	4,467	4,532	4,817	4,932	5,038	5,117
OTHER ENGINEERS	6,554	7,412	7,612	7,926	8,162	8,390	8,496
PHYSICAL SCIENTISTS	27,086	27,553	27,902	27,993	28,178	28,538	28,376
ASTRONOMERS 2/	-	-	-	818	900	1,006	858
CHEMISTS	14,140	14,471	14,736	14,330	14,765	14,625	14,748
PHYSICISTS	10,822	11,056	11,254	11,323	11,010	11,425	11,387
OTHER PHYSICAL SCIENTISTS	2,124	2,026	1,912	1,522	1,503	1,482	1,383
ENVIRONMENTAL SCIENTISTS	7,357	8,075	8,285	8,453	8,678	8,668	8,688
ATMOSPHERIC SCIENTISTS	602	692	821	793	763	762	887
EARTH SCIENTISTS	5,527	5,914	5,963	5,554	5,638	5,664	5,574
OCEANOGRAPHERS	1,228	1,469	1,501	1,488	1,565	1,484	1,520
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	618	712	758	707
MATHEMATICAL AND COMPUTER SCIENTISTS	23,125	23,870	24,349	26,030	27,127	28,380	29,893
MATHEMATICIANS	18,993	19,287	19,564	19,914	20,232	20,566	21,038
COMPUTER SCIENTISTS	4,132	4,583	4,785	6,116	6,895	7,814	8,855
LIFE SCIENTISTS	91,857	94,306	97,726	108,155	110,567	115,711	118,868
AGRICULTURAL SCIENTISTS	12,941	13,065	13,704	14,440	14,567	14,663	15,037
BIOLOGICAL SCIENTISTS	34,891	36,875	37,661	38,714	39,914	40,159	40,903
MEDICAL SCIENTISTS	44,025	44,366	46,361	50,316	50,836	53,085	53,646
OTHER LIFE SCIENTISTS 2/	-	-	-	4,685	5,250	7,804	9,282
PSYCHOLOGISTS	16,787	17,307	17,406	16,733	16,859	16,796	16,788
SOCIAL SCIENTISTS	40,750	41,062	41,836	41,154	41,270	41,728	41,526
ECONOMISTS	10,369	10,495	10,854	11,092	11,230	11,453	11,554
POLITICAL SCIENTISTS	9,065	9,004	9,055	8,767	8,999	9,173	9,151
SOCIOLOGISTS	11,425	11,674	11,502	10,860	10,747	10,762	10,458
OTHER SOCIAL SCIENTISTS	9,891	9,689	10,425	10,435	10,294	10,340	10,363

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-6. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	58,436	61,578	65,587	69,259	74,791	81,539	85,869
ENGINEERS	5,571	5,978	6,331	7,265	7,823	8,385	8,880
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	167	176	168	263	205	239	239
CHEMICAL ENGINEERS	223	240	274	466	381	353	465
CIVIL ENGINEERS	1,017	1,050	1,126	1,204	1,270	1,352	1,386
ELECTRICAL ENGINEERS	1,527	1,466	1,606	1,780	2,065	2,247	2,427
MECHANICAL ENGINEERS	956	1,023	1,119	1,257	1,391	1,599	1,614
OTHER ENGINEERS	1,681	2,023	2,038	2,295	2,511	2,595	2,749
PHYSICAL SCIENTISTS	4,341	4,567	4,937	5,561	5,891	5,925	6,284
ASTRONOMERS 2/	-	-	-	137	165	197	213
CHEMISTS	2,441	2,649	2,928	3,284	3,322	3,403	3,494
PHYSICISTS	1,376	1,426	1,524	1,684	1,904	1,843	2,164
OTHER PHYSICAL SCIENTISTS	524	492	485	456	500	482	413
ENVIRONMENTAL SCIENTISTS	1,209	1,262	1,333	1,507	1,505	1,527	1,456
ATMOSPHERIC SCIENTISTS	118	93	141	150	155	124	177
EARTH SCIENTISTS	967	1,031	1,024	1,015	996	1,014	957
OCEANOGRAPHERS	124	138	168	175	166	156	159
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	167	138	233	163
MATHEMATICAL AND COMPUTER SCIENTISTS	6,791	8,126	8,685	9,927	11,859	13,917	15,746
MATHEMATICIANS	5,144	6,152	6,429	7,165	8,346	9,377	10,265
COMPUTER SCIENTISTS	1,647	1,974	2,256	2,762	3,513	4,540	5,481
LIFE SCIENTISTS	22,725	23,135	25,230	25,547	27,206	30,626	32,656
AGRICULTURAL SCIENTISTS	1,240	1,297	1,318	1,459	1,561	1,782	1,562
BIOLOGICAL SCIENTISTS	5,134	5,743	5,936	6,089	6,437	6,580	6,978
MEDICAL SCIENTISTS	16,351	16,095	17,976	16,800	17,789	19,902	21,269
OTHER LIFE SCIENTISTS 2/	-	-	-	1,199	1,419	2,362	2,847
PSYCHOLOGISTS	6,138	6,392	6,346	6,524	6,527	6,901	6,907
SOCIAL SCIENTISTS	11,661	12,118	12,725	12,928	13,980	14,258	13,940
ECONOMISTS	2,764	3,170	3,233	3,580	3,847	4,002	3,996
POLITICAL SCIENTISTS	2,278	2,212	2,297	2,427	2,575	2,659	2,652
SOCIOLOGISTS	3,757	3,864	3,907	3,641	3,941	3,876	3,722
OTHER SOCIAL SCIENTISTS	2,862	2,872	3,288	3,280	3,617	3,721	3,570

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-7. — SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD: JANUARY 1976 - JANUARY 1983

FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	186,314	193,204	200,366	210,579	218,021	223,832	232,043	236,560
ENGINEERS	19,980	21,198	21,740	23,528	24,482	25,007	25,465	26,167
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	868	871	830	893	1,113	961	988	1,008
CHEMICAL ENGINEERS	1,613	1,711	1,751	1,890	2,070	1,962	1,991	2,098
CIVIL ENGINEERS	3,430	3,518	3,631	3,715	3,797	3,852	4,203	4,386
ELECTRICAL ENGINEERS	4,305	4,317	4,547	5,115	5,481	5,638	5,744	6,041
MECHANICAL ENGINEERS	3,448	3,554	3,620	3,827	4,001	4,156	4,203	4,196
OTHER ENGINEERS	6,316	7,227	7,361	8,088	8,020	8,438	8,336	8,438
PHYSICAL SCIENTISTS	17,290	17,782	18,283	18,797	19,239	19,521	19,633	19,389
ASTRONOMERS 1/	-	-	-	751	736	800	892	755
CHEMISTS	8,470	8,744	9,140	9,084	9,232	9,644	9,424	9,448
PHYSICISTS	7,154	7,449	7,661	7,801	7,988	7,797	8,133	8,257
OTHER PHYSICAL SCIENTISTS	1,666	1,589	1,482	1,161	1,283	1,280	1,184	929
ENVIRONMENTAL SCIENTISTS	5,433	6,211	6,497	6,637	6,895	7,085	7,131	7,020
ATMOSPHERIC SCIENTISTS	574	671	800	784	804	768	760	930
EARTH SCIENTISTS	3,690	4,116	4,230	3,893	4,090	4,236	4,318	4,095
OCEANOGRAPHERS	1,169	1,424	1,467	1,662	1,487	1,561	1,445	1,496
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	-	-	298	514	520	608	499
MATHEMATICAL AND COMPUTER SCIENTISTS	12,253	12,955	13,522	14,469	15,644	16,574	17,472	18,412
MATHEMATICIANS	9,394	9,892	10,251	10,534	11,083	11,470	11,788	12,139
COMPUTER SCIENTISTS	2,859	3,063	3,271	3,935	4,561	5,104	5,684	6,273
LIFE SCIENTISTS	96,409	98,886	102,824	108,984	113,588	116,638	123,165	126,985
AGRICULTURAL SCIENTISTS	12,198	12,079	12,579	13,258	13,498	13,723	14,033	14,126
BIOLOGICAL SCIENTISTS	26,814	28,899	29,503	30,911	31,385	32,934	33,017	33,995
MEDICAL SCIENTISTS	57,397	57,908	60,742	61,586	64,187	65,331	69,910	71,636
OTHER LIFE SCIENTISTS 1/	-	-	-	3,229	4,518	4,650	6,205	7,228
PSYCHOLOGISTS	9,646	9,815	9,989	10,041	10,229	10,438	10,410	10,416
SOCIAL SCIENTISTS	25,303	26,357	27,511	28,123	27,944	28,569	28,767	28,171
ECONOMISTS	6,853	7,316	7,614	7,982	8,111	8,227	8,344	8,299
POLITICAL SCIENTISTS	5,154	5,214	5,340	5,503	5,410	5,628	5,800	5,716
SOCIOLOGISTS	6,329	6,610	6,622	6,628	6,363	6,696	6,528	6,257
OTHER SOCIAL SCIENTISTS	6,967	7,217	7,935	8,010	8,060	8,018	8,095	7,899

1/ DATA NOT AVAILABLE PRIOR TO 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-8. -- FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD: JANUARY 1976 - JANUARY 1983

FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	153,973	159,848	164,732	173,190	179,775	183,160	188,742	191,731
ENGINEERS	16,963	17,955	18,428	19,932	20,468	20,866	21,318	21,849
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	778	778	748	778	945	846	854	867
CHEMICAL ENGINEERS	1,437	1,503	1,540	1,611	1,690	1,687	1,718	1,738
CIVIL ENGINEERS	2,880	2,967	3,079	3,122	3,176	3,242	3,493	3,678
ELECTRICAL ENGINEERS	3,610	3,696	3,847	4,387	4,671	4,738	4,862	5,088
MECHANICAL ENGINEERS	2,982	3,072	3,104	3,277	3,409	3,505	3,505	3,538
OTHER ENGINEERS	5,276	5,939	6,110	6,757	6,577	6,848	6,886	6,940
PHYSICAL SCIENTISTS	15,478	15,940	16,245	16,413	16,773	16,962	17,263	16,986
ASTRONOMERS 1/	-	-	-	687	685	736	813	676
CHEMISTS	7,448	7,716	7,963	7,749	7,779	8,261	8,099	8,151
PHYSICISTS	6,553	6,810	6,981	7,076	7,271	6,958	7,398	7,363
OTHER PHYSICAL SCIENTISTS	1,477	1,414	1,301	901	1,038	1,007	953	796
ENVIRONMENTAL SCIENTISTS	4,870	5,595	5,827	5,891	6,041	6,265	6,302	6,313
ATMOSPHERIC SCIENTISTS	509	608	712	693	701	669	689	819
EARTH SCIENTISTS	3,272	3,662	3,761	3,476	3,570	3,739	3,787	3,666
OCEANOGRAPHERS	1,089	1,325	1,354	1,529	1,360	1,437	1,339	1,380
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	-	-	193	410	420	487	448
MATHEMATICAL AND COMPUTER SCIENTISTS	10,468	10,866	11,191	11,970	12,823	13,411	13,935	14,586
MATHEMATICIANS	8,164	8,426	8,613	8,896	9,156	9,380	9,444	9,630
COMPUTER SCIENTISTS	2,304	2,440	2,578	3,074	3,667	4,031	4,491	4,956
LIFE SCIENTISTS	77,354	79,738	82,278	87,936	92,720	94,549	98,449	100,756
AGRICULTURAL SCIENTISTS	11,405	11,315	11,830	12,335	12,549	12,667	12,811	13,122
BIOLOGICAL SCIENTISTS	23,988	25,803	26,451	27,533	28,158	29,411	29,607	30,238
MEDICAL SCIENTISTS	41,961	42,620	43,997	45,484	48,413	48,757	51,230	51,712
OTHER LIFE SCIENTISTS 1/	-	-	-	2,584	3,600	3,714	4,801	5,684
PSYCHOLOGISTS	7,572	7,869	8,007	7,971	8,049	8,213	8,207	8,230
SOCIAL SCIENTISTS	21,268	21,885	22,756	23,077	22,901	22,894	23,268	23,011
ECONOMISTS	5,952	6,175	6,394	6,619	6,707	6,712	6,828	6,820
POLITICAL SCIENTISTS	4,317	4,306	4,436	4,456	4,376	4,587	4,694	4,660
SOCIOLOGISTS	5,219	5,435	5,446	5,457	5,220	5,249	5,249	4,992
OTHER SOCIAL SCIENTISTS	5,780	5,969	6,480	6,545	6,598	6,346	6,497	6,539

1/ DATA NOT AVAILABLE PRIOR TO 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-9. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD: JANUARY 1976 - JANUARY 1983

FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	32,341	33,356	35,634	37,389	38,246	40,672	43,301	44,829
ENGINEERS	3,017	3,243	3,312	3,596	4,014	4,141	4,147	4,318
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	90	93	82	115	168	115	134	141
CHEMICAL ENGINEERS	176	208	211	279	380	275	273	360
CIVIL ENGINEERS	550	551	552	593	621	610	710	708
ELECTRICAL ENGINEERS	695	621	700	728	810	900	882	953
MECHANICAL ENGINEERS	466	482	516	550	592	651	698	658
OTHER ENGINEERS	1,040	1,288	1,251	1,331	1,443	1,590	1,450	1,498
PHYSICAL SCIENTISTS	1,812	1,842	2,038	2,384	2,466	2,559	2,370	2,403
ASTRONOMERS 1/	-	-	-	64	51	64	79	79
CHEMISTS	1,022	1,028	1,177	1,335	1,453	1,383	1,325	1,297
PHYSICISTS	601	639	680	725	717	839	735	894
OTHER PHYSICAL SCIENTISTS	189	175	181	260	245	273	231	133
ENVIRONMENTAL SCIENTISTS	563	616	670	746	854	820	829	707
ATMOSPHERIC SCIENTISTS	65	63	88	91	103	99	71	111
EARTH SCIENTISTS	418	454	469	417	520	497	531	429
OCEANOGRAPHERS	80	99	113	133	127	124	106	116
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	-	-	105	104	100	121	51
MATHEMATICAL AND COMPUTER SCIENTISTS	1,785	2,089	2,331	2,499	2,821	3,163	3,537	3,826
MATHEMATICIANS	1,230	1,466	1,638	1,638	1,927	2,090	2,344	2,509
COMPUTER SCIENTISTS	555	623	693	861	894	1,073	1,193	1,317
LIFE SCIENTISTS	19,055	19,148	20,546	21,048	20,868	22,089	24,716	26,229
AGRICULTURAL SCIENTISTS	793	764	749	923	949	1,056	1,222	1,004
BIOLOGICAL SCIENTISTS	2,826	3,096	3,052	3,378	3,227	3,523	3,410	3,757
MEDICAL SCIENTISTS	15,436	15,288	16,745	16,102	15,774	16,574	18,680	19,924
OTHER LIFE SCIENTISTS 1/	-	-	-	645	918	936	1,404	1,544
PSYCHOLOGISTS	2,074	1,946	1,982	2,070	2,180	2,225	2,203	2,186
SOCIAL SCIENTISTS	4,035	4,472	4,755	5,046	5,043	5,675	5,499	5,160
ECONOMISTS	901	1,141	1,220	1,363	1,404	1,515	1,516	1,479
POLITICAL SCIENTISTS	837	908	904	1,047	1,034	1,041	1,106	1,056
SOCIOLOGISTS	1,110	1,175	1,176	1,171	1,143	1,447	1,279	1,265
OTHER SOCIAL SCIENTISTS	1,187	1,248	1,455	1,465	1,462	1,672	1,598	1,360

1/ DATA NOT AVAILABLE PRIOR TO 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-10. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION: JANUARY 1976 - JANUARY 1983 1/

DIVISION AND STATE	1976	1977	1978	1980	1981	1982	1983
TOTAL, ALL INSTITUTIONS	288,322	297,856	307,757	324,249	334,487	349,310	358,824
NEW ENGLAND	23,424	24,448	24,975	27,292	27,789	29,748	30,731
CONNECTICUT	5,058	5,370	5,409	6,185	6,184	6,567	6,322
MAINE	952	958	1,059	1,016	1,023	1,060	1,095
MASSACHUSETTS	14,267	15,001	15,317	16,532	16,948	18,480	19,664
NEW HAMPSHIRE	943	1,019	1,103	1,240	1,266	1,283	1,276
RHODE ISLAND	1,186	1,168	1,208	1,301	1,307	1,350	1,358
VERMONT	1,018	932	879	918	1,061	1,008	1,016
MIDDLE ATLANTIC	53,306	54,216	56,416	56,021	59,083	61,748	64,686
NEW JERSEY	7,190	7,081	7,285	7,626	7,998	8,291	8,410
NEW YORK	30,081	30,282	31,800	32,578	34,184	35,559	37,077
PENNSYLVANIA	16,035	16,853	17,331	15,817	16,901	17,898	19,199
EAST NORTH CENTRAL	51,284	52,413	53,457	56,603	56,947	59,299	60,214
ILLINOIS	14,783	15,214	15,159	16,189	16,408	16,738	16,948
INDIANA	5,104	5,214	5,479	5,782	5,854	6,651	6,927
MICHIGAN	11,728	11,739	11,768	11,624	12,115	12,045	11,444
OHIO	11,591	12,046	12,421	14,036	14,006	15,102	16,059
WISCONSIN	8,078	8,200	8,630	8,972	8,564	8,763	8,836
WEST NORTH CENTRAL	22,349	22,078	22,427	24,596	25,485	26,225	26,184
IOWA	3,870	4,014	4,078	4,874	4,987	4,825	5,001
KANSAS	3,406	3,452	3,537	3,894	4,054	4,223	4,037
MINNESOTA	5,186	5,191	5,201	5,386	5,515	5,484	5,327
MISSOURI	6,104	5,648	5,634	6,261	6,719	7,283	7,490
NEBRASKA	2,016	2,020	2,050	2,248	2,239	2,280	2,148
NORTH DAKOTA	774	787	894	958	994	1,117	1,128
SOUTH DAKOTA	993	966	1,033	975	977	1,013	1,053
SOUTH ATLANTIC	41,884	45,034	46,389	49,967	51,824	53,291	55,606
DELAWARE	626	661	676	734	743	800	809
DISTRICT OF COLUMBIA	3,744	4,134	3,733	4,380	4,584	4,552	5,037
FLORIDA	7,198	7,743	8,002	8,912	9,464	9,769	10,444
GEORGIA	5,378	5,593	5,887	6,145	6,137	6,297	6,451
MARYLAND	7,121	7,652	7,784	8,928	9,200	9,475	10,000
NORTH CAROLINA	7,124	7,836	8,267	8,272	8,519	8,818	9,000
SOUTH CAROLINA	3,047	3,094	3,367	4,054	4,250	4,355	4,371
VIRGINIA	5,693	6,351	6,657	6,331	6,759	6,949	7,164
WEST VIRGINIA	1,953	1,970	2,016	2,211	2,168	2,276	2,330
EAST SOUTH CENTRAL	13,477	14,689	15,600	16,865	17,056	17,502	17,665
ALABAMA	3,593	3,842	4,166	4,297	4,525	4,836	5,153
KENTUCKY	2,638	3,021	3,202	4,137	4,136	4,167	3,894
MISSISSIPPI	1,964	2,052	2,153	2,355	2,398	2,504	2,484
TENNESSEE	5,282	5,774	6,079	6,076	5,997	5,995	6,134
WEST SOUTH CENTRAL	24,318	25,452	26,324	29,307	29,615	30,244	31,705
ARKANSAS	2,043	2,213	2,298	2,428	2,299	2,291	2,381
LOUISIANA	4,495	4,333	4,834	5,421	5,488	5,564	5,837
OKLAHOMA	2,502	2,671	2,297	3,197	3,431	3,540	3,700
TEXAS	15,278	16,235	16,895	18,261	18,397	18,849	19,787
MOUNTAIN	13,492	13,563	15,066	16,620	17,607	18,193	18,270
ARIZONA	2,995	2,912	3,167	3,192	3,366	3,257	3,352
COLORADO	4,387	4,278	4,228	4,657	4,603	4,879	4,892
IDAHO	836	900	1,058	1,084	1,183	1,175	1,203
MONTANA	932	934	967	990	1,076	1,132	1,185
NEVADA	602	560	511	491	550	616	697
NEW MEXICO	1,374	1,435	1,574	2,369	2,695	2,797	2,671
UTAH	1,877	1,944	2,906	3,082	3,384	3,501	3,482
WYOMING	487	600	655	755	770	836	788
PACIFIC	42,002	43,310	44,480	44,098	45,522	49,178	49,653
ALASKA	347	345	387	374	368	359	353
CALIFORNIA	31,159	32,176	32,909	32,470	33,608	37,464	38,036
HAWAII	1,239	1,411	1,372	1,360	1,388	1,443	1,441
OREGON	3,983	3,995	4,120	4,103	4,362	4,356	4,349
WASHINGTON	5,274	5,383	5,692	5,791	5,796	5,556	5,474
OUTLYING AREAS	2,786	2,653	2,623	2,880	3,559	3,882	4,110

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-11. -- FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION: JANUARY 1976 - JANUARY 1983 1/

DIVISION AND STATE	1976	1977	1978	1980	1981	1982	1983
TOTAL, ALL INSTITUTIONS	229,886	236,278	242,170	254,990	259,696	267,771	272,955
NEW ENGLAND	18,368	19,006	19,626	21,012	21,375	22,095	22,860
CONNECTICUT	3,955	4,097	4,168	4,615	4,663	4,888	4,774
MAINE	827	826	861	827	837	829	854
MASSACHUSETTS	10,865	11,427	11,835	12,605	12,870	13,358	14,138
NEW HAMPSHIRE	813	873	904	991	878	905	955
RHODE ISLAND	1,090	1,070	1,113	1,188	1,184	1,221	1,236
VERMONT	818	713	745	786	943	894	903
MIDDLE ATLANTIC	39,609	39,865	41,064	42,255	43,853	45,187	46,337
NEW JERSEY	5,379	5,161	5,263	5,578	5,766	5,844	5,832
NEW YORK	22,516	22,887	23,704	24,350	25,243	25,804	26,642
PENNSYLVANIA	11,714	11,817	12,097	12,327	12,844	13,539	13,863
EAST NORTH CENTRAL	40,486	41,266	41,762	44,049	43,243	44,391	44,132
ILLINOIS	11,620	11,945	11,684	12,377	12,707	12,952	12,850
INDIANA	4,322	4,377	4,579	4,751	4,772	5,332	5,553
MICHIGAN	9,121	9,217	9,141	9,094	9,108	9,130	8,811
OHIO	8,930	9,021	9,257	10,528	9,597	9,768	9,766
WISCONSIN	6,493	6,706	7,101	7,299	7,059	7,209	7,152
WEST NORTH CENTRAL	19,722	19,432	19,661	20,901	21,552	21,775	21,903
IOWA	3,471	3,564	3,642	4,223	4,260	4,109	4,239
KANSAS	3,009	2,990	3,057	3,197	3,335	3,440	3,470
MINNESOTA	4,346	4,398	4,374	4,514	4,620	4,568	4,439
MISSOURI	5,497	5,111	5,047	5,334	5,699	5,886	5,967
NEBRASKA	1,777	1,737	1,766	1,838	1,849	1,862	1,857
NORTH DAKOTA	734	753	860	896	923	1,019	1,022
SOUTH DAKOTA	888	879	915	899	866	891	909
SOUTH ATLANTIC	34,641	36,721	37,737	41,287	42,217	43,219	44,570
DELAWARE	577	627	636	692	719	764	775
DISTRICT OF COLUMBIA	2,273	2,418	2,374	2,872	2,957	2,978	3,112
FLORIDA	6,119	6,465	6,649	7,000	7,219	7,511	7,967
GEORGIA	4,665	4,806	5,107	5,349	5,302	5,314	5,383
MARYLAND	5,601	5,872	5,922	7,156	7,245	7,533	7,846
NORTH CAROLINA	6,448	6,966	7,144	7,370	7,596	7,811	7,983
SOUTH CAROLINA	2,551	2,589	2,782	3,512	3,662	3,698	3,727
VIRGINIA	4,721	5,268	5,388	5,506	5,719	5,741	5,854
WEST VIRGINIA	1,686	1,710	1,735	1,830	1,798	1,869	1,923
EAST SOUTH CENTRAL	11,532	12,617	13,221	14,271	14,281	14,568	14,682
ALABAMA	3,050	3,186	3,440	3,646	3,761	3,903	4,150
KENTUCKY	2,307	2,706	2,754	3,468	3,501	3,541	3,376
MISSISSIPPI	1,776	1,860	1,948	2,110	2,100	2,231	2,184
TENNESSEE	4,399	4,865	5,079	5,047	4,919	4,893	4,972
WEST SOUTH CENTRAL	21,031	21,966	22,373	24,613	24,727	25,144	26,166
ARKANSAS	1,867	1,992	1,977	2,232	2,052	2,061	2,136
LOUISIANA	3,860	3,861	4,048	4,642	4,632	4,706	4,922
OKLAHOMA	2,164	2,314	1,972	2,685	2,876	2,883	3,041
TEXAS	13,140	13,799	14,376	15,054	15,167	15,494	16,067
MOUNTAIN	11,708	11,964	13,085	14,137	15,149	15,521	15,513
ARIZONA	2,364	2,378	2,648	2,642	2,832	2,756	2,837
COLORADO	3,876	3,802	3,791	4,096	4,080	4,209	4,186
IDAHO	753	807	957	964	1,032	994	1,018
MONTANA	844	840	860	873	918	939	967
NEVADA	463	488	433	403	401	459	511
NEW MEXICO	1,187	1,237	1,400	1,952	2,222	2,323	2,203
UTAH	1,770	1,852	2,397	2,566	3,034	3,116	3,117
WYOMING	451	560	599	641	630	725	674
PACIFIC	30,266	31,036	31,466	30,378	30,681	33,074	33,929
ALASKA	343	344	321	316	316	320	318
CALIFORNIA	21,664	22,207	22,374	21,383	21,682	24,451	25,446
HAWAII	952	1,002	1,067	1,032	1,048	1,081	1,062
OREGON	2,984	3,163	3,159	3,186	3,186	3,192	3,205
WASHINGTON	4,323	4,320	4,545	4,461	4,449	4,030	3,898
OUTLYING AREAS	2,523	2,405	2,175	2,087	2,618	2,797	2,863

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-12. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION: JANUARY 1976 - JANUARY 1983 1/

DIVISION AND STATE	1976	1977	1978	1980	1981	1982	1983
TOTAL, ALL INSTITUTIONS	58,436	61,578	65,587	69,259	74,791	81,539	85,869
NEW ENGLAND	5,056	5,442	5,349	6,280	6,414	7,653	7,871
CONNECTICUT	1,103	1,273	1,241	1,570	1,521	1,679	1,548
MAINE	125	132	198	189	186	231	241
MASSACHUSETTS	3,402	3,574	3,482	4,027	4,078	5,122	5,526
NEW HAMPSHIRE	130	146	199	249	388	378	321
RHODE ISLAND	96	98	95	113	123	129	122
VERMONT	200	219	134	132	118	114	113
MIDDLE ATLANTIC	13,697	14,351	15,352	13,766	15,230	16,561	18,349
NEW JERSEY	1,811	1,920	2,022	2,048	2,232	2,447	2,578
NEW YORK	7,565	7,395	8,096	8,228	8,941	9,755	10,435
PENNSYLVANIA	4,321	5,036	5,234	3,490	4,057	4,359	5,336
EAST NORTH CENTRAL	10,798	11,147	11,695	12,554	13,704	14,908	16,082
ILLINOIS	3,163	3,269	3,475	3,812	3,701	3,786	4,098
INDIANA	782	837	900	1,031	1,082	1,319	1,374
MICHIGAN	2,607	2,522	2,627	2,530	3,007	2,915	2,633
OHIO	2,661	3,025	3,164	3,508	4,409	5,334	6,293
WISCONSIN	1,585	1,494	1,529	1,673	1,505	1,554	1,684
WEST NORTH CENTRAL	2,627	2,646	2,766	3,695	3,933	4,450	4,281
IOWA	399	450	436	651	727	716	762
KANSAS	397	462	480	697	719	783	567
MINNESOTA	840	793	827	872	895	916	888
MISSOURI	607	537	587	927	1,020	1,397	1,523
NEBRASKA	239	283	284	410	390	418	291
NORTH DAKOTA	40	34	34	62	71	98	106
SOUTH DAKOTA	105	87	118	76	111	122	144
SOUTH ATLANTIC	7,243	8,313	8,652	8,680	9,607	10,072	11,036
DELAWARE	49	34	40	42	24	36	34
DISTRICT OF COLUMBIA	1,471	1,716	1,359	1,508	1,627	1,574	1,925
FLORIDA	1,079	1,278	1,353	1,912	2,245	2,258	2,477
GEORGIA	713	787	780	796	835	983	1,068
MARYLAND	1,520	1,780	1,862	1,772	1,955	1,942	2,154
NORTH CAROLINA	676	870	1,123	902	923	1,007	1,017
SOUTH CAROLINA	496	505	585	542	588	657	644
VIRGINIA	972	1,083	1,269	825	1,040	1,208	1,310
WEST VIRGINIA	267	260	281	381	370	407	407
EAST SOUTH CENTRAL	1,945	2,072	2,379	2,594	2,775	2,934	2,983
ALABAMA	543	656	726	651	764	933	1,003
KENTUCKY	331	315	448	669	635	626	518
MISSISSIPPI	188	192	205	245	298	273	300
TENNESSEE	883	909	1,000	1,029	1,078	1,102	1,162
WEST SOUTH CENTRAL	3,287	3,486	3,951	4,694	4,888	5,100	5,539
ARKANSAS	176	221	321	196	247	230	245
LOUISIANA	635	472	786	779	856	858	915
OKLAHOMA	338	357	325	512	555	657	659
TEXAS	2,138	2,436	2,519	3,207	3,230	3,355	3,720
MOUNTAIN	1,784	1,599	1,981	2,483	2,458	2,672	2,757
ARIZONA	631	534	519	550	534	501	515
COLORADO	511	476	437	561	523	670	706
IDAHO	85	93	101	120	151	181	185
MONTANA	88	94	107	117	158	193	218
NEVADA	139	72	78	88	129	157	186
NEW MEXICO	187	198	174	417	473	474	468
UTAH	107	92	509	516	350	385	365
WYOMING	36	40	56	114	140	111	114
PACIFIC	11,736	12,274	13,014	13,720	14,841	16,104	15,724
ALASKA	4	1	66	58	52	39	35
CALIFORNIA	9,495	9,969	10,535	11,087	11,926	13,013	12,590
HAWAII	287	409	305	328	340	362	379
OREGON	999	832	961	917	1,176	1,164	1,144
WASHINGTON	951	1,063	1,147	1,330	1,347	1,526	1,576
OUTLYING AREAS	263	248	448	793	941	1,085	1,247

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-13. -- FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY CONTROL AND LEVEL OF ATTAINMENT: JANUARY 1976 - JANUARY 1983 1/

CONTROL AND LEVEL OF ATTAINMENT	1976	1977	1978	1980	1981	1982	1983	PERCENT CHANGE 1982-83
ALL INSTITUTIONS								
TOTAL	229,886	236,278	242,170	254,990	259,696	267,771	272,955	1.9%
DOCTOR'S	129,876	134,646	138,971	143,429	145,950	148,627	151,747	2.1
FIRST PROFESSIONAL	30,099	30,835	31,633	34,331	34,372	37,177	37,172	.0
MASTER'S	53,718	54,096	54,557	56,741	57,238	59,138	60,722	2.7
BACHELOR'S	16,193	16,701	17,009	20,489	22,136	22,829	23,314	2.1
PUBLIC INSTITUTIONS								
TOTAL	161,818	166,510	169,396	178,172	181,526	187,548	190,544	1.6
DOCTOR'S	90,107	93,341	95,916	99,027	100,880	102,132	103,889	1.7
FIRST PROFESSIONAL	16,248	16,563	16,425	17,414	17,483	19,846	19,820	-.1
MASTER'S	42,786	43,408	43,842	45,781	46,015	47,576	48,602	2.2
BACHELOR'S	12,677	13,198	13,213	15,950	17,148	17,994	18,233	1.3
PRIVATE INSTITUTIONS								
TOTAL	68,068	69,768	72,774	76,818	78,170	80,223	82,411	2.7
DOCTOR'S	39,769	41,305	43,055	44,402	45,070	46,495	47,858	2.9
FIRST PROFESSIONAL	13,851	14,272	15,208	16,917	16,889	17,331	17,352	.1
MASTER'S	10,932	10,688	10,715	10,960	11,223	11,562	12,120	4.8
BACHELOR'S	3,516	3,503	3,796	4,539	4,988	4,835	5,081	5.1

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-14. -- PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY CONTROL AND LEVEL OF ATTAINMENT: JANUARY 1976 - JANUARY 1983 1/

CONTROL AND LEVEL OF ATTAINMENT	1976	1977	1978	1980	1981	1982	1983	PERCENT CHANGE 1982-83
ALL INSTITUTIONS								
TOTAL	58,436	61,578	65,587	69,259	74,791	81,539	85,869	5.3%
DOCTOR'S	14,959	15,562	16,987	18,167	18,793	19,922	20,447	2.6
FIRST PROFESSIONAL	14,202	13,688	15,101	14,363	15,592	15,869	16,999	7.1
MASTER'S	21,723	23,915	24,672	26,731	29,299	31,950	33,322	4.3
BACHELOR'S	7,552	8,413	8,827	9,998	11,107	13,798	15,101	9.4
PUBLIC INSTITUTIONS								
TOTAL	36,839	39,388	41,559	45,855	49,210	53,464	55,917	4.6
DOCTOR'S	8,581	8,969	9,827	11,152	11,299	11,652	12,070	3.6
FIRST PROFESSIONAL	6,693	6,707	7,296	7,673	7,944	7,860	8,101	3.1
MASTER'S	15,548	17,028	17,439	18,760	20,844	22,696	23,521	3.6
BACHELOR'S	6,017	6,684	6,997	8,270	9,123	11,256	12,225	8.6
PRIVATE INSTITUTIONS								
TOTAL	21,597	22,190	24,028	23,404	25,581	28,075	29,952	6.7
DOCTOR'S	6,378	6,593	7,160	7,015	7,494	8,270	8,377	1.3
FIRST PROFESSIONAL	7,509	6,981	7,805	6,690	7,648	8,009	8,898	11.1
MASTER'S	6,175	6,887	7,233	7,971	8,455	9,254	9,801	5.9
BACHELOR'S	1,535	1,729	1,830	1,728	1,984	2,542	2,876	13.1

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-15. — MALE FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	194,367	199,421	203,209	210,775	213,033	217,094	219,875
ENGINEERS	22,475	23,599	24,068	25,759	26,212	27,090	27,803
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	936	946	946	1,117	1,035	1,064	1,068
CHEMICAL ENGINEERS	1,601	1,644	1,692	1,827	1,833	1,820	1,856
CIVIL ENGINEERS	3,932	4,022	4,112	4,207	4,313	4,572	4,779
ELECTRICAL ENGINEERS	5,331	5,392	5,502	6,260	6,393	6,657	7,004
MECHANICAL ENGINEERS	4,301	4,408	4,471	4,725	4,820	4,948	5,019
OTHER ENGINEERS	6,374	7,187	7,345	7,623	7,818	8,029	8,077
PHYSICAL SCIENTISTS	24,980	25,342	25,451	25,502	25,580	25,889	25,692
ASTRONOMERS 2/	-	-	-	750	821	932	792
CHEMISTS	12,633	12,908	13,012	12,551	12,893	12,728	12,798
PHYSICISTS	10,428	10,618	10,771	10,831	10,521	10,915	10,863
OTHER PHYSICAL SCIENTISTS	1,919	1,816	1,668	1,370	1,345	1,314	1,239
ENVIRONMENTAL SCIENTISTS	6,952	7,546	7,696	7,775	7,915	7,853	7,867
ATMOSPHERIC SCIENTISTS	569	654	786	749	713	712	817
EARTH SCIENTISTS	5,240	5,565	5,552	5,156	5,212	5,214	5,113
OCEANOGRAPHERS	1,143	1,327	1,358	1,343	1,386	1,273	1,317
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	527	604	654	620
MATHEMATICAL AND COMPUTER SCIENTISTS	20,021	20,612	20,874	21,945	22,674	23,503	24,590
MATHEMATICIANS	16,371	16,566	16,649	16,738	16,904	17,044	17,343
COMPUTER SCIENTISTS	3,650	4,046	4,225	5,207	5,770	6,459	7,247
LIFE SCIENTISTS	73,571	75,595	77,776	84,054	84,758	86,780	87,971
AGRICULTURAL SCIENTISTS	11,776	11,953	12,465	13,113	13,210	13,197	13,468
BIOLOGICAL SCIENTISTS	27,865	29,314	29,870	30,497	31,170	31,049	31,414
MEDICAL SCIENTISTS	33,930	34,328	35,441	38,601	38,349	39,926	40,338
OTHER LIFE SCIENTISTS 2/	-	-	-	1,843	2,029	2,608	2,751
PSYCHOLOGISTS	12,804	13,055	13,092	12,415	12,444	12,348	12,337
SOCIAL SCIENTISTS	33,564	33,672	34,252	33,325	33,450	33,631	33,615
ECONOMISTS	9,436	9,738	9,886	9,982	10,110	10,254	10,341
POLITICAL SCIENTISTS	8,036	7,955	7,976	7,655	7,839	7,894	7,903
SOCIOLOGISTS	8,499	8,631	8,475	7,920	7,790	7,734	7,598
OTHER SOCIAL SCIENTISTS	7,593	7,348	7,915	7,768	7,711	7,749	7,773

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA WERE NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-16. — FEMALE FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	35,519	36,857	38,961	44,215	46,663	50,677	53,080
ENGINEERS	449	506	598	713	805	860	1,013
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	30	22	18	27	22	20	23
CHEMICAL ENGINEERS	37	40	33	59	69	90	96
CIVIL ENGINEERS	83	89	128	118	133	167	210
ELECTRICAL ENGINEERS	74	71	91	114	125	132	167
MECHANICAL ENGINEERS	45	59	61	92	112	90	98
OTHER ENGINEERS	180	225	267	303	344	361	419
PHYSICAL SCIENTISTS	2,106	2,211	2,451	2,491	2,598	2,649	2,684
ASTRONOMERS 2/	-	-	-	68	79	74	66
CHEMISTS	1,507	1,563	1,724	1,779	1,872	1,897	1,950
PHYSICISTS	394	438	483	492	489	510	524
OTHER PHYSICAL SCIENTISTS	205	210	244	152	158	168	144
ENVIRONMENTAL SCIENTISTS	405	529	589	678	763	815	821
ATMOSPHERIC SCIENTISTS	33	38	35	44	50	50	70
EARTH SCIENTISTS	287	349	411	398	426	450	461
OCEANOGRAPHERS	85	142	143	145	179	211	203
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	91	108	104	87
MATHEMATICAL AND COMPUTER SCIENTISTS	3,104	3,258	3,475	4,085	4,453	4,877	5,303
MATHEMATICIANS	2,622	2,721	2,915	3,176	3,328	3,522	3,695
COMPUTER SCIENTISTS	482	537	560	909	1,125	1,355	1,608
LIFE SCIENTISTS	18,286	18,711	19,950	24,101	25,809	28,931	30,897
AGRICULTURAL SCIENTISTS	1,165	1,112	1,239	1,327	1,357	1,466	1,569
BIOLOGICAL SCIENTISTS	7,026	7,561	7,791	8,217	8,744	9,110	9,489
MEDICAL SCIENTISTS	10,095	10,038	10,920	11,715	12,487	13,159	13,308
OTHER LIFE SCIENTISTS 2/	-	-	-	2,842	3,221	5,196	6,531
PSYCHOLOGISTS	3,983	4,252	4,314	4,318	4,415	4,448	4,451
SOCIAL SCIENTISTS	7,186	7,390	7,584	7,829	7,820	8,097	7,911
ECONOMISTS	933	957	968	1,110	1,120	1,199	1,213
POLITICAL SCIENTISTS	1,029	1,049	1,079	1,112	1,160	1,279	1,248
SOCIOLOGISTS	2,926	3,043	3,027	2,940	2,957	3,028	2,860
OTHER SOCIAL SCIENTISTS	2,298	2,341	2,510	2,667	2,583	2,591	2,590

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA WERE NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-17. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1978 AND JANUARY 1982-83

FIELD	1978	1982	1983
TOTAL	271,656	299,705	305,447
ENGINEERS	27,576	31,005	32,048
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,024	1,161	1,159
CHEMICAL ENGINEERS	1,869	2,031	2,116
CIVIL ENGINEERS	4,741	5,253	5,534
ELECTRICAL ENGINEERS	6,272	7,588	8,043
MECHANICAL ENGINEERS	5,019	5,584	5,690
OTHER ENGINEERS	8,621	9,385	9,510
PHYSICAL SCIENTISTS	30,580	31,155	31,070
ASTRONOMERS 1/	-	1,048	932
CHEMISTS	16,378	16,171	16,298
PHYSICISTS	12,056	12,221	12,271
OTHER PHYSICAL SCIENTISTS	2,146	1,716	1,566
ENVIRONMENTAL SCIENTISTS	9,004	9,299	9,338
ATMOSPHERIC SCIENTISTS	899	815	970
EARTH SCIENTISTS	6,523	6,059	6,002
OCEANOGRAPHERS	1,582	1,569	1,590
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	856	775
MATHEMATICAL AND COMPUTER SCIENTISTS	28,191	34,061	36,207
MATHEMATICIANS	22,461	24,529	25,314
COMPUTER SCIENTISTS	5,731	9,532	10,894
LIFE SCIENTISTS	108,854	127,652	130,581
AGRICULTURAL SCIENTISTS	14,378	15,530	15,835
BIOLOGICAL SCIENTISTS	40,711	42,665	43,904
MEDICAL SCIENTISTS	53,765	60,824	60,644
OTHER LIFE SCIENTISTS 1/	-	8,630	10,198
PSYCHOLOGISTS	20,141	19,442	19,367
SOCIAL SCIENTISTS	47,340	47,097	46,832
ECONOMISTS	12,277	12,968	13,065
POLITICAL SCIENTISTS	10,135	10,223	10,155
SOCIOLOGISTS	13,175	12,277	11,894
OTHER SOCIAL SCIENTISTS	11,754	11,630	11,717

1/ DATA NOT AVAILABLE PRIOR TO 1979.
NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-18. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT UNIVERSITIES AND COLLEGES BY FIELD: JANUARY 1978 AND JANUARY 1982-1983

FIELD	1978	1982	1983
TOTAL	55,962	59,473	60,265
ENGINEERS	5,910	6,724	7,055
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	290	314	325
CHEMICAL ENGINEERS	462	458	532
CIVIL ENGINEERS	717	782	770
ELECTRICAL ENGINEERS	1,327	1,721	1,905
MECHANICAL ENGINEERS	833	862	893
OTHER ENGINEERS	2,281	2,589	2,633
PHYSICAL SCIENTISTS	7,016	7,303	7,058
ASTRONOMERS 1/	-	408	381
CHEMISTS	3,291	3,111	3,060
PHYSICISTS	2,795	3,081	3,044
OTHER PHYSICAL SCIENTISTS	930	705	572
ENVIRONMENTAL SCIENTISTS	2,584	2,995	3,034
ATMOSPHERIC SCIENTISTS	453	400	545
EARTH SCIENTISTS	1,391	1,406	1,299
OCEANOGRAPHERS	741	930	955
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	261	236
MATHEMATICAL AND COMPUTER SCIENTISTS	2,463	2,149	2,196
MATHEMATICIANS	1,614	1,354	1,302
COMPUTER SCIENTISTS	847	795	893
LIFE SCIENTISTS	31,045	35,228	35,847
AGRICULTURAL SCIENTISTS	4,556	6,595	6,560
BIOLOGICAL SCIENTISTS	12,360	12,680	13,108
MEDICAL SCIENTISTS	14,130	15,329	15,483
OTHER LIFE SCIENTISTS 1/	-	623	699
PSYCHOLOGISTS	2,032	1,478	1,464
SOCIAL SCIENTISTS	4,912	3,593	3,614
ECONOMISTS	1,651	1,240	1,197
POLITICAL SCIENTISTS	754	623	663
SOCIOLOGISTS	1,117	702	640
OTHER SOCIAL SCIENTISTS	1,389	1,029	1,113

1/ DATA NOT AVAILABLE PRIOR TO 1979.
NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-19. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD: JANUARY 1978 AND JANUARY 1982-83

FIELD	1978	1982	1983
TOTAL	181,068	204,649	207,363
ENGINEERS	20,055	22,719	23,290
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	779	895	906
CHEMICAL ENGINEERS	1,653	1,804	1,858
CIVIL ENGINEERS	3,337	3,745	3,945
ELECTRICAL ENGINEERS	4,140	5,121	5,372
MECHANICAL ENGINEERS	3,338	3,716	3,735
OTHER ENGINEERS	6,808	7,436	7,476
PHYSICAL SCIENTISTS	17,424	18,181	17,901
ASTRONOMERS 1/	-	808	696
CHEMISTS	8,673	8,640	8,675
PHYSICISTS	7,345	7,659	7,668
OTHER PHYSICAL SCIENTISTS	1,406	1,074	862
ENVIRONMENTAL SCIENTISTS	6,212	6,597	6,625
ATMOSPHERIC SCIENTISTS	768	715	871
EARTH SCIENTISTS	4,032	3,944	3,854
OCEANOGRAPHERS	1,412	1,395	1,423
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	543	476
MATHEMATICAL AND COMPUTER SCIENTISTS	12,192	15,219	16,012
MATHEMATICIANS	9,351	10,307	10,578
COMPUTER SCIENTISTS	2,842	4,912	5,434
LIFE SCIENTISTS	91,367	107,804	109,809
AGRICULTURAL SCIENTISTS	12,299	13,431	13,678
BIOLOGICAL SCIENTISTS	28,087	30,636	31,741
MEDICAL SCIENTISTS	50,981	58,515	58,298
OTHER LIFE SCIENTISTS 1/	-	5,221	6,091
PSYCHOLOGISTS	8,945	8,987	8,960
SOCIAL SCIENTISTS	24,873	25,144	24,766
ECONOMISTS	6,909	7,342	7,310
POLITICAL SCIENTISTS	4,848	5,113	5,012
SOCIOLOGISTS	5,988	5,697	5,398
OTHER SOCIAL SCIENTISTS	7,129	6,991	7,047

1/ DATA NOT AVAILABLE PRIOR TO 1979.
NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-20. -- FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD: JANUARY 1978 AND JANUARY 1982-1983

FIELD	1978	1982	1983
TOTAL	53,395	57,780	58,729
ENGINEERS	5,672	6,607	6,938
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	278	304	318
CHEMICAL ENGINEERS	459	451	524
CIVIL ENGINEERS	678	758	754
ELECTRICAL ENGINEERS	1,261	1,690	1,871
MECHANICAL ENGINEERS	788	836	864
OTHER ENGINEERS	2,208	2,568	2,608
PHYSICAL SCIENTISTS	6,644	6,956	6,743
ASTRONOMERS 1/	-	405	379
CHEMISTS	3,053	2,923	2,882
PHYSICISTS	2,669	2,969	2,951
OTHER PHYSICAL SCIENTISTS	922	660	529
ENVIRONMENTAL SCIENTISTS	2,443	2,891	2,925
ATMOSPHERIC SCIENTISTS	430	394	377
EARTH SCIENTISTS	1,296	1,345	1,298
OCEANOGRAPHERS	717	909	930
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	244	218
MATHEMATICAL AND COMPUTER SCIENTISTS	2,194	1,921	2,008
MATHEMATICIANS	1,435	1,210	1,190
COMPUTER SCIENTISTS	759	711	817
LIFE SCIENTISTS	30,203	34,755	35,386
AGRICULTURAL SCIENTISTS	4,339	6,502	6,460
BIOLOGICAL SCIENTISTS	11,883	12,345	12,783
MEDICAL SCIENTISTS	13,983	15,306	15,466
OTHER LIFE SCIENTISTS 1/	-	602	677
PSYCHOLOGISTS	1,820	1,351	1,367
SOCIAL SCIENTISTS	4,419	3,299	3,365
ECONOMISTS	1,532	1,179	1,148
POLITICAL SCIENTISTS	653	563	607
SOCIOLOGISTS	975	606	563
OTHER SOCIAL SCIENTISTS	1,258	952	1,046

1/ DATA NOT AVAILABLE PRIOR TO 1979.
NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-21. — MALE SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	262,591	277,535	283,292	210,775	217,094	219,875	51,816	60,441	63,417
ENGINEERS	32,746	35,117	36,234	25,759	27,090	27,803	6,987	8,027	8,431
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,365	1,293	1,294	1,117	1,064	1,068	248	229	226
CHEMICAL ENGINEERS	2,272	2,147	2,281	1,827	1,820	1,856	445	327	425
CIVIL ENGINEERS	5,374	5,859	6,090	4,207	4,572	4,779	1,167	1,287	1,311
ELECTRICAL ENGINEERS	8,011	8,843	9,356	6,260	6,657	7,004	1,751	2,186	2,352
MECHANICAL ENGINEERS	5,953	6,496	6,580	4,725	4,948	5,019	1,228	1,548	1,561
OTHER ENGINEERS	9,771	10,479	10,633	7,623	8,029	8,077	2,148	2,450	2,556
PHYSICAL SCIENTISTS	29,739	30,491	30,608	25,502	25,889	25,692	4,237	4,602	4,916
ASTRONOMERS	867	1,098	976	750	932	792	117	166	184
CHEMISTS	14,796	15,146	15,249	12,551	12,728	12,798	2,245	2,418	2,451
PHYSICISTS	12,355	12,566	12,810	10,831	10,915	10,863	1,524	1,651	1,947
OTHER PHYSICAL SCIENTISTS	1,721	1,681	1,573	1,370	1,314	1,239	351	367	334
ENVIRONMENTAL SCIENTISTS	8,985	9,045	9,017	7,775	7,853	7,867	1,210	1,192	1,150
ATMOSPHERIC SCIENTISTS	885	826	971	749	712	817	136	114	154
EARTH SCIENTISTS	5,988	6,012	5,869	5,156	5,214	5,113	832	798	756
OCEANOGRAPHERS	1,468	1,392	1,435	1,343	1,273	1,317	125	119	118
OTHER ENVIRONMENTAL SCIENTISTS	644	815	742	527	654	620	117	161	122
MATHEMATICAL AND COMPUTER SCIENTISTS	29,065	33,633	36,040	21,945	23,503	24,590	7,120	10,130	11,450
MATHEMATICIANS	21,463	23,346	24,272	16,738	17,044	17,343	4,725	6,302	6,929
COMPUTER SCIENTISTS	7,602	10,287	11,768	5,207	6,459	7,247	2,395	3,828	4,521
LIFE SCIENTISTS	103,072	108,828	111,122	84,054	86,780	87,971	19,018	22,048	23,151
AGRICULTURAL SCIENTISTS	14,285	14,599	14,660	13,113	13,197	13,468	1,172	1,402	1,192
BIOLOGICAL SCIENTISTS	34,301	35,126	35,675	30,497	31,049	31,414	3,804	4,077	4,261
MEDICAL SCIENTISTS	52,084	55,560	57,028	38,601	39,926	40,338	13,483	15,634	16,690
OTHER LIFE SCIENTISTS	2,402	3,543	3,759	1,843	2,608	2,751	559	935	1,008
PSYCHOLOGISTS	16,259	16,473	16,493	12,415	12,348	12,337	3,844	4,125	4,156
SOCIAL SCIENTISTS	42,725	43,948	43,778	33,325	33,631	33,615	9,400	10,317	10,163
ECONOMISTS	13,031	13,703	13,800	9,982	10,254	10,341	3,049	3,449	3,459
POLITICAL SCIENTISTS	9,589	10,006	10,020	7,655	7,894	7,903	1,934	2,112	2,117
SOCIOLOGISTS	10,141	10,067	9,833	7,920	7,734	7,598	2,221	2,333	2,235
OTHER SOCIAL SCIENTISTS	9,964	10,172	10,125	7,768	7,749	7,773	2,196	2,423	2,352

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-22. — FEMALE SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	61,658	71,775	75,532	44,215	50,677	53,080	17,443	21,098	22,452
ENGINEERS	991	1,218	1,462	713	860	1,013	278	358	449
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	42	30	36	27	20	23	15	10	13
CHEMICAL ENGINEERS	80	116	136	59	90	96	21	26	40
CIVIL ENGINEERS	155	232	285	118	167	210	37	65	75
ELECTRICAL ENGINEERS	143	193	242	114	132	167	29	61	75
MECHANICAL ENGINEERS	121	141	151	92	90	98	29	51	53
OTHER ENGINEERS	450	506	612	303	361	419	147	145	193
PHYSICAL SCIENTISTS	3,815	3,972	4,052	2,491	2,649	2,684	1,324	1,323	1,368
ASTRONOMERS	88	105	95	68	74	66	20	31	29
CHEMISTS	2,818	2,882	2,993	1,779	1,897	1,950	1,039	985	1,043
PHYSICISTS	652	702	741	492	510	524	160	192	217
OTHER PHYSICAL SCIENTISTS	257	283	223	152	168	144	105	115	79
ENVIRONMENTAL SCIENTISTS	975	1,150	1,127	678	815	821	297	335	306
ATMOSPHERIC SCIENTISTS	58	60	93	44	50	70	14	10	23
EARTH SCIENTISTS	581	666	662	398	450	461	183	216	201
OCEANOGRAPHERS	195	248	244	145	211	203	50	37	41
OTHER ENVIRONMENTAL SCIENTISTS	141	176	128	91	104	87	50	72	41
MATHEMATICAL AND COMPUTER SCIENTISTS	6,892	8,664	9,599	4,085	4,877	5,303	2,807	3,787	4,296
MATHEMATICIANS	5,616	6,597	7,031	3,176	3,522	3,695	2,440	3,075	3,336
COMPUTER SCIENTISTS	1,276	2,067	2,568	909	1,355	1,608	367	712	960
LIFE SCIENTISTS	30,630	37,509	40,402	24,101	28,931	30,897	6,529	8,578	9,505
AGRICULTURAL SCIENTISTS	1,614	1,846	1,939	1,327	1,466	1,569	287	380	370
BIOLOGICAL SCIENTISTS	10,502	11,613	12,206	8,217	9,110	9,489	2,285	2,503	2,717
MEDICAL SCIENTISTS	15,032	17,427	17,887	11,715	13,159	13,308	3,317	4,268	4,579
OTHER LIFE SCIENTISTS	3,482	6,623	8,370	2,842	5,196	6,531	640	1,427	1,839
PSYCHOLOGISTS	6,998	7,224	7,202	4,318	4,448	4,451	2,680	2,776	2,751
SOCIAL SCIENTISTS	11,357	12,038	11,688	7,829	8,097	7,911	3,528	3,941	3,777
ECONOMISTS	1,641	1,752	1,750	1,110	1,199	1,213	531	553	537
POLITICAL SCIENTISTS	1,605	1,826	1,783	1,112	1,279	1,248	493	547	535
SOCIOLOGISTS	4,360	4,571	4,347	2,940	3,028	2,860	1,420	1,543	1,487
OTHER SOCIAL SCIENTISTS	3,751	3,889	3,808	2,667	2,591	2,590	1,084	1,298	1,218

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-23. — MALE SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	179,168	187,472	190,005	149,792	154,663	156,224	29,376	32,809	33,781
ENGINEERS	23,642	24,502	25,008	19,862	20,603	21,006	3,780	3,899	4,002
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,082	972	985	924	841	852	158	131	133
CHEMICAL ENGINEERS	1,992	1,892	1,978	1,633	1,641	1,656	359	251	322
CIVIL ENGINEERS	3,675	4,012	4,154	3,083	3,356	3,504	592	656	650
ELECTRICAL ENGINEERS	5,360	5,603	5,864	4,573	4,752	4,951	787	851	913
MECHANICAL ENGINEERS	3,902	4,109	4,096	3,332	3,441	3,465	570	668	631
OTHER ENGINEERS	7,631	7,914	7,931	6,317	6,572	6,578	1,314	1,342	1,353
PHYSICAL SCIENTISTS	17,407	17,743	17,496	15,490	15,871	15,590	1,917	1,872	1,906
ASTRONOMERS	668	818	689	629	755	624	39	63	65
CHEMISTS	7,984	8,170	8,140	6,958	7,188	7,206	1,026	982	934
PHYSICISTS	7,624	7,734	7,834	6,978	7,080	7,035	646	654	799
OTHER PHYSICAL SCIENTISTS	1,131	1,021	833	925	848	725	206	173	108
ENVIRONMENTAL SCIENTISTS	6,185	6,293	6,227	5,532	5,682	5,702	653	611	525
ATMOSPHERIC SCIENTISTS	750	704	841	661	643	752	89	61	89
EARTH SCIENTISTS	3,730	3,891	3,692	3,309	3,484	3,363	421	407	329
OCEANOGRAPHERS	1,301	1,223	1,271	1,221	1,148	1,192	80	75	79
OTHER ENVIRONMENTAL SCIENTISTS	404	475	423	341	407	395	63	68	28
MATHEMATICAL AND COMPUTER SCIENTISTS	13,286	14,688	15,377	11,196	12,006	12,521	2,090	2,682	2,856
MATHEMATICIANS	9,383	9,944	10,193	8,072	8,270	8,418	1,311	1,674	1,775
COMPUTER SCIENTISTS	3,903	4,744	5,184	3,124	3,736	4,103	779	1,008	1,081
LIFE SCIENTISTS	89,251	94,283	96,207	73,086	75,610	76,604	16,165	18,673	19,603
AGRICULTURAL SCIENTISTS	12,121	12,421	12,435	11,358	11,472	11,699	763	949	736
BIOLOGICAL SCIENTISTS	24,259	25,036	25,505	22,221	22,889	23,190	2,038	2,147	2,315
MEDICAL SCIENTISTS	50,797	54,138	55,569	37,896	39,228	39,666	12,901	14,910	15,903
OTHER LIFE SCIENTISTS	2,074	2,688	2,698	1,611	2,021	2,049	463	667	649
PSYCHOLOGISTS	7,343	7,457	7,506	6,107	6,122	6,150	1,236	1,335	1,356
SOCIAL SCIENTISTS	22,054	22,506	22,184	18,519	18,769	18,651	3,535	3,737	3,533
ECONOMISTS	7,269	7,457	7,392	6,091	6,161	6,138	1,178	1,296	1,254
POLITICAL SCIENTISTS	4,628	4,860	4,841	3,810	4,015	4,015	818	845	826
SOCIOLOGISTS	4,459	4,445	4,305	3,839	3,769	3,631	620	676	674
OTHER SOCIAL SCIENTISTS	5,698	5,744	5,646	4,779	4,824	4,867	919	920	779

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-24. — FEMALE SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	38,853	44,571	46,555	29,983	34,079	35,507	8,870	10,492	11,048
ENGINEERS	840	963	1,159	606	715	843	234	248	316
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	31	16	23	21	13	15	10	3	8
CHEMICAL ENGINEERS	78	99	120	57	77	82	21	22	38
CIVIL ENGINEERS	122	191	232	93	137	174	29	54	58
ELECTRICAL ENGINEERS	121	141	177	98	110	137	23	31	40
MECHANICAL ENGINEERS	99	94	100	77	64	73	22	30	27
OTHER ENGINEERS	389	422	507	260	314	362	129	108	145
PHYSICAL SCIENTISTS	1,832	1,890	1,893	1,283	1,392	1,396	549	498	497
ASTRONOMERS	68	74	66	56	58	52	12	16	14
CHEMISTS	1,248	1,254	1,308	821	911	945	427	343	363
PHYSICISTS	364	399	423	293	318	328	71	81	95
OTHER PHYSICAL SCIENTISTS	152	163	96	113	105	71	39	58	25
ENVIRONMENTAL SCIENTISTS	710	838	793	509	620	611	201	218	182
ATMOSPHERIC SCIENTISTS	54	56	89	40	46	67	14	10	22
EARTH SCIENTISTS	360	427	403	261	303	303	99	124	100
OCEANOGRAPHERS	186	222	225	139	191	188	47	31	37
OTHER ENVIRONMENTAL SCIENTISTS	110	133	76	69	80	53	41	53	23
MATHEMATICAL AND COMPUTER SCIENTISTS	2,358	2,784	3,035	1,627	1,929	2,065	731	855	970
MATHEMATICIANS	1,700	1,844	1,946	1,084	1,174	1,212	616	670	734
COMPUTER SCIENTISTS	658	940	1,089	543	755	853	115	185	236
LIFE SCIENTISTS	24,337	28,882	30,778	19,634	22,839	24,152	4,703	6,043	6,626
AGRICULTURAL SCIENTISTS	1,377	1,612	1,691	1,191	1,339	1,423	186	273	268
BIOLOGICAL SCIENTISTS	7,126	7,981	8,490	5,937	6,718	7,048	1,189	1,263	1,442
MEDICAL SCIENTISTS	13,390	15,772	16,067	10,517	12,002	12,046	2,873	3,770	4,021
OTHER LIFE SCIENTISTS	2,444	3,517	4,530	1,989	2,780	3,635	455	737	895
PSYCHOLOGISTS	2,886	2,953	2,910	1,942	2,085	2,080	944	868	830
SOCIAL SCIENTISTS	5,890	6,261	5,987	4,382	4,499	4,360	1,508	1,762	1,627
ECONOMISTS	842	887	907	616	667	682	226	220	225
POLITICAL SCIENTISTS	782	940	875	566	679	645	216	261	230
SOCIOLOGISTS	1,904	2,083	1,952	1,381	1,480	1,361	523	603	591
OTHER SOCIAL SCIENTISTS	2,362	2,351	2,253	1,819	1,673	1,672	543	678	581

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-25. — MALE SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	181,414	191,022	193,993	147,546	151,980	153,500	33,868	39,042	40,493
ENGINEERS	23,981	25,741	26,348	18,813	19,898	20,390	5,168	5,843	5,958
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	791	803	804	645	652	664	146	151	140
CHEMICAL ENGINEERS	1,634	1,521	1,601	1,291	1,297	1,315	343	224	286
CIVIL ENGINEERS	4,281	4,720	4,819	3,365	3,720	3,857	916	1,000	962
ELECTRICAL ENGINEERS	5,264	5,736	6,037	4,021	4,274	4,547	1,243	1,462	1,490
MECHANICAL ENGINEERS	4,242	4,592	4,677	3,421	3,562	3,644	821	1,030	1,033
OTHER ENGINEERS	7,769	8,369	8,410	6,070	6,393	6,363	1,699	1,976	2,047
PHYSICAL SCIENTISTS	19,772	20,134	20,290	16,763	17,040	16,971	3,009	3,094	3,319
ASTRONOMERS	603	831	693	517	711	567	86	120	126
CHEMISTS	10,032	10,121	10,152	8,350	8,404	8,437	1,682	1,717	1,715
PHYSICISTS	7,977	8,062	8,309	6,955	7,035	7,077	1,022	1,027	1,232
OTHER PHYSICAL SCIENTISTS	1,160	1,120	1,136	941	890	890	219	230	246
ENVIRONMENTAL SCIENTISTS	7,207	7,253	7,253	6,270	6,349	6,365	937	904	888
ATMOSPHERIC SCIENTISTS	756	693	851	639	593	721	117	100	130
EARTH SCIENTISTS	4,846	4,835	4,676	4,202	4,226	4,113	644	609	563
OCEANOGRAPHERS	1,129	1,090	1,117	1,025	995	1,017	104	95	100
OTHER ENVIRONMENTAL SCIENTISTS	476	635	609	404	535	514	72	100	95
MATHEMATICAL AND COMPUTER SCIENTISTS	21,454	24,654	26,356	16,370	17,421	18,140	5,084	7,233	8,216
MATHEMATICIANS	15,911	17,173	17,780	12,432	12,600	12,802	3,479	4,573	4,978
COMPUTER SCIENTISTS	5,543	7,481	8,576	3,938	4,821	5,338	1,605	2,660	3,238
LIFE SCIENTISTS	68,077	71,492	72,174	56,526	58,326	58,833	11,551	13,166	13,341
AGRICULTURAL SCIENTISTS	13,684	13,990	14,062	12,556	12,654	12,910	1,128	1,336	1,152
BIOLOGICAL SCIENTISTS	23,291	23,333	23,597	20,698	20,600	20,743	2,593	2,733	2,854
MEDICAL SCIENTISTS	29,487	31,432	31,496	22,053	23,072	22,950	7,434	8,360	8,546
OTHER LIFE SCIENTISTS	1,615	2,737	3,019	1,219	2,000	2,230	396	737	789
PSYCHOLOGISTS	11,119	11,124	11,101	8,821	8,749	8,691	2,298	2,375	2,410
SOCIAL SCIENTISTS	29,804	30,624	30,471	23,983	24,197	24,110	5,821	6,427	6,361
ECONOMISTS	8,530	8,907	8,947	6,790	6,959	6,996	1,740	1,948	1,951
POLITICAL SCIENTISTS	6,255	6,517	6,578	5,175	5,323	5,376	1,080	1,194	1,202
SOCIOLOGISTS	7,121	7,009	6,890	5,744	5,560	5,434	1,377	1,449	1,456
OTHER SOCIAL SCIENTISTS	7,898	8,191	8,056	6,274	6,355	6,304	1,624	1,836	1,752

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-26. — FEMALE SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	42,613	49,990	52,468	30,626	35,568	37,044	11,987	14,422	15,424
ENGINEERS	754	942	1,113	531	659	769	223	283	344
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	20	20	22	14	13	15	6	7	7
CHEMICAL ENGINEERS	63	93	95	48	72	77	15	21	18
CIVIL ENGINEERS	126	197	222	98	141	164	28	56	58
ELECTRICAL ENGINEERS	85	128	160	62	84	104	23	44	56
MECHANICAL ENGINEERS	94	107	110	70	67	67	24	40	43
OTHER ENGINEERS	366	397	504	239	282	342	127	115	162
PHYSICAL SCIENTISTS	2,472	2,528	2,601	1,590	1,663	1,696	882	865	905
ASTRONOMERS	65	75	63	50	54	46	15	21	17
CHEMISTS	1,834	1,846	1,912	1,122	1,171	1,207	712	675	705
PHYSICISTS	425	447	471	317	331	338	108	116	133
OTHER PHYSICAL SCIENTISTS	148	160	155	101	107	105	47	53	50
ENVIRONMENTAL SCIENTISTS	712	847	865	494	611	634	218	236	231
ATMOSPHERIC SCIENTISTS	50	47	85	36	37	64	14	10	21
EARTH SCIENTISTS	440	525	496	307	364	355	133	161	141
OCEANOGRAPHERS	140	172	179	94	143	145	46	29	34
OTHER ENVIRONMENTAL SCIENTISTS	82	103	105	57	67	70	25	36	35
MATHEMATICAL AND COMPUTER SCIENTISTS	5,257	6,580	7,300	3,081	3,692	4,030	2,176	2,888	3,270
MATHEMATICIANS	4,263	5,000	5,335	2,357	2,630	2,765	1,906	2,370	2,570
COMPUTER SCIENTISTS	994	1,580	1,965	724	1,062	1,265	270	518	700
LIFE SCIENTISTS	20,640	25,890	27,728	16,252	20,029	21,226	4,388	5,861	6,502
AGRICULTURAL SCIENTISTS	1,565	1,783	1,864	1,287	1,416	1,503	278	367	361
BIOLOGICAL SCIENTISTS	6,719	7,447	7,767	5,115	5,785	5,978	1,604	1,662	1,789
MEDICAL SCIENTISTS	9,914	11,536	11,778	7,824	8,776	8,774	2,090	2,760	3,004
OTHER LIFE SCIENTISTS	2,442	5,124	6,319	2,026	4,052	4,971	416	1,072	1,348
PSYCHOLOGISTS	4,769	4,845	4,753	3,052	3,142	3,070	1,717	1,703	1,683
SOCIAL SCIENTISTS	8,009	8,358	8,108	5,626	5,772	5,619	2,383	2,586	2,489
ECONOMISTS	1,094	1,170	1,135	750	815	803	344	355	332
POLITICAL SCIENTISTS	1,023	1,188	1,160	729	860	838	294	328	322
SOCIOLOGISTS	2,966	3,031	2,966	2,019	2,097	1,990	947	934	976
OTHER SOCIAL SCIENTISTS	2,926	2,969	2,847	2,128	2,000	1,988	798	969	859

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-27. — MALE SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	81,177	86,513	89,299	63,229	65,114	66,375	17,948	21,399	22,924
ENGINEERS	8,765	9,376	9,886	6,946	7,192	7,413	1,819	2,184	2,473
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	574	490	490	472	412	404	102	78	86
CHEMICAL ENGINEERS	638	626	680	536	523	541	102	103	139
CIVIL ENGINEERS	1,093	1,139	1,271	842	852	922	251	287	349
ELECTRICAL ENGINEERS	2,747	3,107	3,319	2,239	2,383	2,457	508	724	862
MECHANICAL ENGINEERS	1,711	1,904	1,903	1,304	1,386	1,375	407	518	528
OTHER ENGINEERS	2,002	2,110	2,223	1,553	1,636	1,714	449	474	509
PHYSICAL SCIENTISTS	9,967	10,357	10,318	8,739	8,849	8,721	1,228	1,508	1,597
ASTRONOMERS	264	267	283	233	221	225	31	46	58
CHEMISTS	4,764	5,025	5,097	4,201	4,324	4,361	563	701	736
PHYSICISTS	4,378	4,504	4,501	3,876	3,880	3,786	502	624	715
OTHER PHYSICAL SCIENTISTS	561	561	437	429	424	349	132	137	88
ENVIRONMENTAL SCIENTISTS	1,778	1,792	1,764	1,505	1,504	1,502	273	288	262
ATMOSPHERIC SCIENTISTS	129	133	120	110	119	96	19	14	24
EARTH SCIENTISTS	1,142	1,177	1,193	954	988	1,000	188	189	193
OCEANOGRAPHERS	339	302	318	318	278	300	21	24	18
OTHER ENVIRONMENTAL SCIENTISTS	168	180	133	123	119	106	45	61	27
MATHEMATICAL AND COMPUTER SCIENTISTS	7,611	8,979	9,684	5,575	6,082	6,450	2,036	2,897	3,234
MATHEMATICIANS	5,552	6,173	6,492	4,306	4,444	4,541	1,246	1,729	1,951
COMPUTER SCIENTISTS	2,059	2,806	3,192	1,269	1,638	1,909	790	1,168	1,283
LIFE SCIENTISTS	34,995	37,336	38,948	27,528	28,454	29,138	7,467	8,882	9,810
AGRICULTURAL SCIENTISTS	601	609	598	557	543	558	44	66	40
BIOLOGICAL SCIENTISTS	11,010	11,793	12,078	9,799	10,449	10,671	1,211	1,344	1,407
MEDICAL SCIENTISTS	22,597	24,128	25,532	16,548	16,854	17,388	6,049	7,274	8,144
OTHER LIFE SCIENTISTS	787	806	740	624	608	521	163	198	219
PSYCHOLOGISTS	5,140	5,349	5,392	3,594	3,599	3,646	1,546	1,750	1,746
SOCIAL SCIENTISTS	12,921	13,324	13,307	9,342	9,434	9,505	3,579	3,890	3,802
ECONOMISTS	4,501	4,796	4,853	3,192	3,295	3,345	1,309	1,501	1,508
POLITICAL SCIENTISTS	3,334	3,489	3,442	2,480	2,571	2,527	854	918	915
SOCIOLOGISTS	3,020	3,058	2,943	2,176	2,174	2,164	844	884	779
OTHER SOCIAL SCIENTISTS	2,066	1,981	2,069	1,494	1,394	1,469	572	587	600

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-28. — FEMALE SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	19,045	21,785	23,064	13,589	15,109	16,036	5,456	6,676	7,028
ENGINEERS	237	276	349	182	201	244	55	75	105
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	22	10	14	13	7	8	9	3	6
CHEMICAL ENGINEERS	17	23	41	11	18	19	6	5	22
CIVIL ENGINEERS	29	35	63	20	26	44	9	9	17
ELECTRICAL ENGINEERS	58	65	82	52	48	63	6	17	19
MECHANICAL ENGINEERS	27	34	41	22	23	31	5	11	10
OTHER ENGINEERS	84	109	108	64	79	77	20	30	31
PHYSICAL SCIENTISTS	1,343	1,444	1,451	901	986	988	442	458	463
ASTRONOMERS	23	30	32	18	20	20	5	10	12
CHEMISTS	984	1,036	1,081	657	726	743	327	310	338
PHYSICISTS	227	255	270	175	179	186	52	76	84
OTHER PHYSICAL SCIENTISTS	109	123	68	51	61	39	58	62	29
ENVIRONMENTAL SCIENTISTS	263	303	262	184	204	187	79	99	75
ATMOSPHERIC SCIENTISTS	8	13	8	8	13	6	0	0	2
EARTH SCIENTISTS	141	141	166	91	86	106	50	55	60
OCEANOGRAPHERS	55	76	65	51	68	58	4	8	7
OTHER ENVIRONMENTAL SCIENTISTS	59	73	23	34	37	17	25	36	6
MATHEMATICAL AND COMPUTER SCIENTISTS	1,635	2,084	2,299	1,004	1,185	1,273	631	899	1,026
MATHEMATICIANS	1,353	1,597	1,696	819	892	930	534	705	766
COMPUTER SCIENTISTS	282	487	603	185	293	343	97	194	260
LIFE SCIENTISTS	9,990	11,619	12,674	7,849	8,902	9,671	2,141	2,717	3,003
AGRICULTURAL SCIENTISTS	49	63	75	40	50	66	9	13	9
BIOLOGICAL SCIENTISTS	3,783	4,166	4,439	3,102	3,325	3,511	681	841	928
MEDICAL SCIENTISTS	5,118	5,891	6,109	3,891	4,383	4,534	1,227	1,508	1,575
OTHER LIFE SCIENTISTS	1,040	1,499	2,051	816	1,144	1,560	224	355	491
PSYCHOLOGISTS	2,229	2,379	2,449	1,266	1,306	1,381	963	1,073	1,068
SOCIAL SCIENTISTS	3,368	3,680	3,580	2,203	2,325	2,292	1,145	1,355	1,288
ECONOMISTS	547	582	615	360	384	410	187	198	205
POLITICAL SCIENTISTS	582	638	623	383	419	410	199	219	213
SOCIOLOGISTS	1,394	1,540	1,381	921	931	870	473	609	511
OTHER SOCIAL SCIENTISTS	825	920	961	539	591	602	286	329	359

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	349,310	358,824	2.7%	241,012	246,461	2.3%	108,298	112,363	3.8%
ENGINEERS	36,335	37,696	3.7	26,683	27,461	2.9	9,652	10,235	6.0
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,323	1,330	.5	823	826	.4	500	504	.8
CHEMICAL ENGINEERS	2,263	2,417	6.8	1,614	1,696	5.1	649	721	11.1
CIVIL ENGINEERS	6,091	6,375	4.7	4,917	5,041	2.5	1,174	1,334	13.6
ELECTRICAL ENGINEERS	9,036	9,598	6.2	5,864	6,197	5.7	3,172	3,401	7.2
MECHANICAL ENGINEERS	6,637	6,731	1.4	4,699	4,787	1.9	1,938	1,944	.3
OTHER ENGINEERS	10,985	11,245	2.4	8,766	8,914	1.7	2,219	2,331	5.0
PHYSICAL SCIENTISTS	34,463	34,660	.6	22,662	22,891	1.0	11,801	11,769	-.3
ASTRONOMERS	1,203	1,071	-11.0	906	756	-16.6	297	315	6.1
CHEMISTS	18,028	18,242	1.2	11,967	12,064	.8	6,061	6,178	1.9
PHYSICISTS	13,268	13,551	2.1	8,509	8,780	3.2	4,759	4,771	.3
OTHER PHYSICAL SCIENTISTS	1,964	1,796	-8.6	1,280	1,291	.9	684	505	-26.2
ENVIRONMENTAL SCIENTISTS	10,195	10,144	-.5	8,100	8,118	.2	2,095	2,026	-3.3
ATMOSPHERIC SCIENTISTS	886	1,064	20.1	740	936	26.5	146	128	-12.3
EARTH SCIENTISTS	6,678	6,531	-2.2	5,360	5,172	-3.5	1,318	1,359	3.1
OCEANOGRAPHERS	1,640	1,679	2.4	1,262	1,296	2.7	378	383	1.3
OTHER ENVIRONMENTAL SCIENTISTS	991	870	-12.2	738	714	-3.3	253	156	-38.3
MATHEMATICAL AND COMPUTER SCIENTISTS	42,297	45,639	7.9	31,234	33,656	7.8	11,063	11,983	8.3
MATHEMATICIANS	29,943	31,303	4.5	22,173	23,115	4.2	7,770	8,188	5.4
COMPUTER SCIENTISTS	12,354	14,336	16.0	9,061	10,541	16.3	3,293	3,795	15.2
LIFE SCIENTISTS	146,337	151,524	3.5	97,382	99,902	2.6	48,955	51,622	5.4
AGRICULTURAL SCIENTISTS	16,445	16,599	.9	15,773	15,926	1.0	672	673	.1
BIOLOGICAL SCIENTISTS	46,739	47,881	2.4	30,780	31,364	1.9	15,959	16,517	3.5
MEDICAL SCIENTISTS	72,987	74,915	2.6	42,968	43,274	.7	30,019	31,641	5.4
OTHER LIFE SCIENTISTS	10,166	12,129	19.3	7,861	9,338	18.8	2,305	2,791	21.1
PSYCHOLOGISTS	23,697	23,695	.0	15,969	15,854	-.7	7,728	7,841	1.5
SOCIAL SCIENTISTS	55,986	55,466	-.9	38,982	38,579	-1.0	17,004	16,887	-.7
ECONOMISTS	15,455	15,550	.6	10,077	10,082	.0	5,378	5,468	1.7
POLITICAL SCIENTISTS	11,832	11,803	-.2	7,705	7,738	.4	4,127	4,065	-1.5
SOCIOLOGISTS	14,638	14,180	-3.1	10,040	9,856	-1.8	4,598	4,324	-6.0
OTHER SOCIAL SCIENTISTS	14,061	13,933	-.9	11,160	10,903	-2.3	2,901	3,030	4.4

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-30. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	267,771	272,955	1.9%	187,548	190,544	1.6%	80,223	82,411	2.7%
ENGINEERS	27,950	28,816	3.1	20,557	21,159	2.9	7,393	7,657	3.6
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,084	1,091	.6	665	679	2.1	419	412	-1.7
CHEMICAL ENGINEERS	1,910	1,952	2.2	1,369	1,392	1.7	541	560	3.5
CIVIL ENGINEERS	4,739	4,989	5.3	3,861	4,021	4.1	878	968	10.3
ELECTRICAL ENGINEERS	6,789	7,171	5.6	4,358	4,651	6.7	2,431	2,520	3.7
MECHANICAL ENGINEERS	5,038	5,117	1.6	3,629	3,711	2.3	1,409	1,406	-.2
OTHER ENGINEERS	8,390	8,496	1.3	6,675	6,705	.4	1,715	1,791	4.4
PHYSICAL SCIENTISTS	28,538	28,376	-.6	18,703	18,667	-.2	9,835	9,709	-1.3
ASTRONOMERS	1,006	858	-14.7	765	613	-19.9	241	245	1.7
CHEMISTS	14,625	14,748	.8	9,575	9,644	.7	5,050	5,104	1.1
PHYSICISTS	11,425	11,387	-.3	7,366	7,415	.7	4,059	3,972	-2.1
OTHER PHYSICAL SCIENTISTS	1,482	1,383	-6.7	997	995	-.2	485	388	-20.0
ENVIRONMENTAL SCIENTISTS	8,668	8,688	.2	6,960	6,999	.6	1,708	1,689	-1.1
ATMOSPHERIC SCIENTISTS	762	887	16.4	630	785	24.6	132	102	-22.7
EARTH SCIENTISTS	5,664	5,574	-1.6	4,590	4,468	-2.7	1,074	1,106	3.0
OCEANOGRAPHERS	1,484	1,520	2.4	1,138	1,162	2.1	346	358	3.5
OTHER ENVIRONMENTAL SCIENTISTS	758	707	-6.7	602	584	-3.0	156	123	-21.2
MATHEMATICAL AND COMPUTER SCIENTISTS	28,380	29,893	5.3	21,113	22,170	5.0	7,267	7,723	6.3
MATHEMATICIANS	20,566	21,038	2.3	15,230	15,967	2.2	5,336	5,471	2.5
COMPUTER SCIENTISTS	7,814	8,855	13.3	5,883	6,603	12.2	1,931	2,252	16.6
LIFE SCIENTISTS	115,711	118,868	2.7	78,355	80,059	2.2	37,356	38,809	3.9
AGRICULTURAL SCIENTISTS	14,663	15,037	2.6	14,070	14,413	2.4	593	624	5.2
BIOLOGICAL SCIENTISTS	40,159	40,903	1.9	26,385	26,721	1.3	13,774	14,182	3.0
MEDICAL SCIENTISTS	53,085	53,646	1.1	31,848	31,724	-.4	21,237	21,922	3.2
OTHER LIFE SCIENTISTS	7,804	9,282	18.9	6,052	7,201	19.0	1,752	2,081	18.8
PSYCHOLOGISTS	16,796	16,788	.0	11,891	11,761	-1.1	4,905	5,027	2.5
SOCIAL SCIENTISTS	41,728	41,526	-.5	29,969	29,729	-.8	11,759	11,797	.3
ECONOMISTS	11,453	11,554	.9	7,774	7,799	.3	3,679	3,755	2.1
POLITICAL SCIENTISTS	9,173	9,151	-.2	6,183	6,214	.5	2,990	2,937	-1.8
SOCIOLOGISTS	10,762	10,458	-2.8	7,657	7,424	-3.0	3,105	3,034	-2.3
OTHER SOCIAL SCIENTISTS	10,340	10,363	.2	8,355	8,292	-.8	1,985	2,071	4.3

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-31. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	81,539	85,869	5.3%	53,464	55,917	4.6%	28,075	29,952	6.7%
ENGINEERS	8,385	8,880	5.9	6,126	6,302	2.9	2,259	2,578	14.1
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	239	239	.0	158	147	-7.0	81	92	13.6
CHEMICAL ENGINEERS	353	465	31.7	245	304	24.1	108	161	49.1
CIVIL ENGINEERS	1,352	1,386	2.5	1,056	1,020	-3.4	296	366	23.6
ELECTRICAL ENGINEERS	2,247	2,427	8.0	1,506	1,546	2.7	741	881	18.9
MECHANICAL ENGINEERS	1,599	1,614	.9	1,070	1,076	.6	529	538	1.7
OTHER ENGINEERS	2,595	2,749	5.9	2,091	2,209	5.6	504	540	7.1
PHYSICAL SCIENTISTS	5,925	6,284	6.1	3,959	4,224	6.7	1,966	2,060	4.8
ASTRONOMERS	197	213	8.1	141	143	1.4	56	70	25.0
CHEMISTS	3,403	3,494	2.7	2,392	2,420	1.2	1,011	1,074	6.2
PHYSICISTS	1,843	2,164	17.4	1,143	1,365	19.4	700	799	14.1
OTHER PHYSICAL SCIENTISTS	482	413	-14.3	283	296	4.6	199	117	-41.2
ENVIRONMENTAL SCIENTISTS	1,527	1,456	-4.6	1,140	1,119	-1.8	387	337	-12.9
ATMOSPHERIC SCIENTISTS	124	177	42.7	110	151	37.3	14	26	85.7
EARTH SCIENTISTS	1,014	957	-5.6	770	704	-8.6	244	253	3.7
OCEANOGRAPHERS	156	159	1.9	124	134	8.1	32	25	-21.9
OTHER ENVIRONMENTAL SCIENTISTS	233	163	-30.0	136	130	-4.4	97	33	-66.0
MATHEMATICAL AND COMPUTER SCIENTISTS	13,917	15,746	13.1	10,121	11,486	13.5	3,796	4,260	12.2
MATHEMATICIANS	9,377	10,265	9.5	6,943	7,548	8.7	2,434	2,717	11.6
COMPUTER SCIENTISTS	4,540	5,481	20.7	3,178	3,938	23.9	1,362	1,543	13.3
LIFE SCIENTISTS	30,626	32,656	6.6	19,027	19,843	4.3	11,599	12,813	10.5
AGRICULTURAL SCIENTISTS	1,782	1,562	-12.3	1,703	1,513	-11.2	79	49	-38.0
BIOLOGICAL SCIENTISTS	6,580	6,978	6.0	4,395	4,643	5.6	2,185	2,335	6.9
MEDICAL SCIENTISTS	19,902	21,269	6.9	11,120	11,550	3.9	8,782	9,719	10.7
OTHER LIFE SCIENTISTS	2,362	2,847	20.5	1,809	2,137	18.1	553	710	28.4
PSYCHOLOGISTS	6,901	6,907	.1	4,078	4,093	.4	2,823	2,814	-.3
SOCIAL SCIENTISTS	14,258	13,940	-2.2	9,013	8,850	-1.8	5,245	5,090	-3.0
ECONOMISTS	4,002	3,996	-.1	2,303	2,283	-.9	1,699	1,713	.8
POLITICAL SCIENTISTS	2,659	2,652	-.3	1,522	1,524	.1	1,137	1,128	-.8
SOCIOLOGISTS	3,876	3,722	-4.0	2,383	2,432	2.1	1,493	1,290	-13.6
OTHER SOCIAL SCIENTISTS	3,721	3,570	-4.1	2,805	2,611	-6.9	916	959	4.7

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-32. — SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	232,043	236,560	1.9%	157,184	159,196	1.3%	74,859	77,364	3.3%
ENGINEERS	25,465	26,167	2.8	17,846	18,113	1.5	7,619	8,054	5.7
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	988	1,008	2.0	572	581	1.6	416	427	2.6
CHEMICAL ENGINEERS	1,991	2,098	5.4	1,420	1,476	3.9	571	622	8.9
CIVIL ENGINEERS	4,203	4,386	4.4	3,305	3,387	2.5	898	999	11.2
ELECTRICAL ENGINEERS	5,744	6,041	5.2	3,276	3,415	4.2	2,468	2,626	6.4
MECHANICAL ENGINEERS	4,203	4,196	-.2	2,830	2,845	.5	1,373	1,351	-1.6
OTHER ENGINEERS	8,336	8,438	1.2	6,443	6,409	-.5	1,893	2,029	7.2
PHYSICAL SCIENTISTS	19,633	19,389	-1.2	12,763	12,696	-.5	6,870	6,693	-2.6
ASTRONOMERS	892	755	-15.4	671	517	-23.0	221	238	7.7
CHEMISTS	9,424	9,448	.3	6,373	6,390	.3	3,051	3,058	.2
PHYSICISTS	8,133	8,257	1.5	5,086	5,213	2.5	3,047	3,044	-.1
OTHER PHYSICAL SCIENTISTS	1,184	929	-21.5	633	576	-9.0	551	353	-35.9
ENVIRONMENTAL SCIENTISTS	7,131	7,020	-1.6	5,632	5,623	-.2	1,499	1,397	-6.8
ATMOSPHERIC SCIENTISTS	760	930	22.4	632	820	29.7	128	110	-14.1
EARTH SCIENTISTS	4,318	4,095	-5.2	3,486	3,262	-6.4	832	833	.1
OCEANOGRAPHERS	1,445	1,496	3.5	1,084	1,129	4.2	361	367	1.7
OTHER ENVIRONMENTAL SCIENTISTS	608	499	-17.9	430	412	-4.2	178	87	-51.1
MATHEMATICAL AND COMPUTER SCIENTISTS	17,472	18,412	5.4	12,431	13,073	5.2	5,041	5,339	5.9
MATHEMATICIANS	11,788	12,139	3.0	8,520	8,709	2.2	3,268	3,430	5.0
COMPUTER SCIENTISTS	5,684	6,273	10.4	3,911	4,364	11.6	1,773	1,909	7.7
LIFE SCIENTISTS	123,165	126,985	3.1	80,670	82,499	2.3	42,495	44,486	4.7
AGRICULTURAL SCIENTISTS	14,033	14,126	.7	13,550	13,660	.8	483	466	-3.5
BIOLOGICAL SCIENTISTS	33,017	33,995	3.0	21,450	22,017	2.6	11,567	11,978	3.6
MEDICAL SCIENTISTS	69,910	71,636	2.5	40,836	41,130	.7	29,074	30,506	4.9
OTHER LIFE SCIENTISTS	6,205	7,228	16.5	4,834	5,692	17.7	1,371	1,536	12.0
PSYCHOLOGISTS	10,410	10,416	.1	7,000	6,904	-1.4	3,410	3,512	3.0
SOCIAL SCIENTISTS	28,767	28,171	-2.1	20,842	20,288	-2.7	7,925	7,883	-.5
ECONOMISTS	8,344	8,299	-.5	5,851	5,734	-2.0	2,493	2,565	2.9
POLITICAL SCIENTISTS	5,800	5,716	-1.4	3,800	3,779	-.6	2,000	1,937	-3.1
SOCIOLOGISTS	6,528	6,257	-4.2	4,819	4,669	-3.1	1,709	1,588	-7.1
OTHER SOCIAL SCIENTISTS	8,095	7,899	-2.4	6,372	6,106	-4.2	1,723	1,793	4.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-33. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	188,742	191,731	1.6%	131,042	132,751	1.3%	57,700	58,980	2.2%
ENGINEERS	21,318	21,849	2.5	15,186	15,504	2.1	6,132	6,345	3.5
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	854	867	1.5	501	518	3.4	353	349	-1.1
CHEMICAL ENGINEERS	1,718	1,738	1.2	1,229	1,242	1.1	489	496	1.4
CIVIL ENGINEERS	2,493	3,678	5.3	2,811	2,920	3.9	682	758	11.1
ELECTRICAL ENGINEERS	4,862	5,088	4.6	2,844	3,022	6.3	2,018	2,066	2.4
MECHANICAL ENGINEERS	3,505	3,538	.9	2,430	2,478	2.0	1,075	1,060	-1.4
OTHER ENGINEERS	6,886	6,940	.8	5,371	5,324	-.9	1,515	1,616	6.7
PHYSICAL SCIENTISTS	17,263	16,986	-1.6	11,275	11,160	-1.0	5,988	5,826	-2.7
ASTRONOMERS	813	676	-16.9	616	477	-22.6	197	199	1.0
CHEMISTS	8,099	8,151	.6	5,445	5,474	.5	2,654	2,677	.9
PHYSICISTS	7,398	7,363	-.5	4,668	4,707	.8	2,730	2,656	-2.7
OTHER PHYSICAL SCIENTISTS	953	796	-16.5	546	502	-8.1	407	294	-27.8
ENVIRONMENTAL SCIENTISTS	6,302	6,313	.2	5,019	5,067	1.0	1,283	1,246	-2.9
ATMOSPHERIC SCIENTISTS	689	819	18.9	562	721	28.3	127	98	-22.8
EARTH SCIENTISTS	3,787	3,666	-3.2	3,076	2,939	-4.5	711	727	2.3
OCEANOGRAPHERS	1,339	1,380	3.1	1,003	1,030	2.7	336	350	4.2
OTHER ENVIRONMENTAL SCIENTISTS	487	448	-8.0	378	377	-.3	109	71	-34.9
MATHEMATICAL AND COMPUTER SCIENTISTS	13,935	14,586	4.7	10,387	10,845	4.4	3,548	3,741	5.4
MATHEMATICIANS	9,444	9,630	2.0	7,070	7,183	1.6	2,374	2,447	3.1
COMPUTER SCIENTISTS	4,491	4,956	10.4	3,317	3,662	10.4	1,174	1,294	10.2
LIFE SCIENTISTS	98,449	100,756	2.3	65,728	66,986	1.9	32,721	33,770	3.2
AGRICULTURAL SCIENTISTS	12,811	13,122	2.4	12,365	12,667	2.4	446	455	2.0
BIOLOGICAL SCIENTISTS	29,607	30,238	2.1	19,207	19,551	1.8	10,400	10,687	2.8
MEDICAL SCIENTISTS	51,230	51,712	.9	30,439	30,321	-.4	20,791	21,391	2.9
OTHER LIFE SCIENTISTS	4,801	5,684	13.4	3,717	4,447	19.6	1,084	1,237	14.1
PSYCHOLOGISTS	8,207	8,230	.3	5,927	5,888	-.7	2,280	2,342	2.7
SOCIAL SCIENTISTS	23,268	23,011	-1.1	17,520	17,301	-1.3	5,748	5,710	-.7
ECONOMISTS	6,828	6,820	-.1	5,019	4,989	-.6	1,809	1,831	1.2
POLITICAL SCIENTISTS	4,694	4,660	-.7	3,249	3,274	.8	1,445	1,386	-4.1
SOCIOLOGISTS	5,249	4,992	-4.9	4,059	3,843	-5.3	1,190	1,149	-3.4
OTHER SOCIAL SCIENTISTS	6,497	6,539	.6	5,193	5,195	.0	1,304	1,344	3.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-34. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	43,301	44,829	3.5%	26,142	26,445	1.2%	17,159	18,384	7.1%
ENGINEERS	4,147	4,318	4.1	2,660	2,609	-1.9	1,487	1,709	14.9
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	134	141	5.2	71	63	-11.3	63	78	23.8
CHEMICAL ENGINEERS	273	360	31.9	191	234	22.5	82	126	53.7
CIVIL ENGINEERS	710	708	-.3	494	467	-5.5	216	241	11.6
ELECTRICAL ENGINEERS	882	953	8.0	432	393	-9.0	450	560	24.4
MECHANICAL ENGINEERS	698	658	-5.7	400	367	-8.3	298	291	-2.3
OTHER ENGINEERS	1,450	1,498	3.3	1,072	1,085	1.2	378	413	9.3
PHYSICAL SCIENTISTS	2,370	2,403	1.4	1,488	1,536	3.2	882	867	-1.7
ASTRONOMERS	79	79	.0	55	40	-27.3	24	39	62.5
CHEMISTS	1,325	1,297	-2.1	928	916	-1.3	397	381	-4.0
PHYSICISTS	735	894	21.6	418	506	21.1	317	388	22.4
OTHER PHYSICAL SCIENTISTS	231	133	-42.4	87	74	-14.9	144	59	-59.0
ENVIRONMENTAL SCIENTISTS	829	707	-14.7	613	556	-9.3	216	151	-30.1
ATMOSPHERIC SCIENTISTS	71	111	56.3	70	99	41.4	1	12	1100.0
EARTH SCIENTISTS	531	429	-19.2	410	323	-21.2	121	106	-12.4
OCEANOGRAPHERS	106	116	9.4	81	99	22.2	25	17	-32.0
OTHER ENVIRONMENTAL SCIENTISTS	121	51	-57.9	52	35	-32.7	69	16	-76.8
MATHEMATICAL AND COMPUTER SCIENTISTS	3,537	3,826	8.2	2,044	2,228	9.0	1,493	1,598	7.0
MATHEMATICIANS	2,344	2,509	7.0	1,450	1,526	5.2	894	983	10.0
COMPUTER SCIENTISTS	1,193	1,317	10.4	594	702	18.2	599	615	2.7
LIFE SCIENTISTS	24,716	26,229	6.1	14,942	15,513	3.8	9,774	10,716	9.6
AGRICULTURAL SCIENTISTS	1,222	1,004	-17.8	1,185	993	-16.2	37	11	-70.3
BIOLOGICAL SCIENTISTS	3,410	3,757	10.2	2,243	2,466	9.9	1,167	1,291	10.6
MEDICAL SCIENTISTS	18,680	19,924	6.7	10,397	10,809	4.0	8,283	9,115	10.0
OTHER LIFE SCIENTISTS	1,404	1,544	10.0	1,117	1,245	11.5	287	299	4.2
PSYCHOLOGISTS	2,203	2,186	-.8	1,073	1,016	-5.3	1,130	1,170	3.5
SOCIAL SCIENTISTS	5,499	5,160	-6.2	3,322	2,987	-10.1	2,177	2,173	-.2
ECONOMISTS	1,516	1,479	-2.4	832	745	-10.5	684	734	7.3
POLITICAL SCIENTISTS	1,106	1,056	-4.5	551	505	-8.3	555	551	-.7
SOCIOLOGISTS	1,279	1,265	-1.1	760	826	8.7	519	439	-15.4
OTHER SOCIAL SCIENTISTS	1,598	1,360	-14.9	1,179	911	-22.7	419	449	7.2

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-35. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	299,705	305,447	1.9%	207,856	211,610	1.8%	91,849	93,837	2.2%
ENGINEERS	31,005	32,048	3.4	22,853	23,605	3.3	8,152	8,443	3.6
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,161	1,159	-.2	707	724	2.4	454	435	-4.2
CHEMICAL ENGINEERS	2,031	2,116	4.2	1,450	1,513	4.3	581	603	3.8
CIVIL ENGINEERS	5,253	5,534	5.3	4,273	4,438	3.9	980	1,096	11.8
ELECTRICAL ENGINEERS	7,588	8,043	6.0	4,917	5,253	6.8	2,671	2,790	4.5
MECHANICAL ENGINEERS	5,584	5,690	1.9	4,016	4,117	2.5	1,568	1,573	.3
OTHER ENGINEERS	9,385	9,510	1.3	7,489	7,562	1.0	1,896	1,948	2.7
PHYSICAL SCIENTISTS	31,155	31,070	-.3	20,401	20,513	.5	10,754	10,557	-1.8
ASTRONOMERS	1,048	932	-11.1	786	662	-15.8	262	270	3.1
CHEMISTS	16,171	16,298	.8	10,629	10,732	1.0	5,542	5,566	.4
PHYSICISTS	12,221	12,271	.4	7,837	7,987	1.9	4,384	4,284	-2.3
OTHER PHYSICAL SCIENTISTS	1,716	1,566	-8.7	1,149	1,131	-1.6	567	435	-23.3
ENVIRONMENTAL SCIENTISTS	9,299	9,338	.4	7,407	7,484	1.0	1,892	1,854	-2.0
ATMOSPHERIC SCIENTISTS	815	970	19.0	675	858	27.1	140	112	-20.0
EARTH SCIENTISTS	6,059	6,002	-.9	4,865	4,771	-1.9	1,194	1,231	3.1
OCEANOGRAPHERS	1,569	1,590	1.3	1,204	1,219	1.2	365	371	1.6
OTHER ENVIRONMENTAL SCIENTISTS	856	775	-9.5	663	635	-4.2	193	140	-27.5
MATHEMATICAL AND COMPUTER SCIENTISTS	34,061	36,207	6.3	25,177	26,716	6.1	8,884	9,491	6.8
MATHEMATICIANS	24,529	25,314	3.2	18,148	18,705	3.1	6,381	6,609	3.6
COMPUTER SCIENTISTS	9,532	10,894	14.3	7,028	8,010	14.0	2,504	2,884	15.2
LIFE SCIENTISTS	127,652	130,581	2.3	85,415	86,973	1.8	42,237	43,608	3.2
AGRICULTURAL SCIENTISTS	15,530	15,835	2.0	14,890	15,183	2.0	640	652	1.9
BIOLOGICAL SCIENTISTS	42,665	43,904	2.9	28,088	28,648	2.0	14,577	15,256	4.7
MEDICAL SCIENTISTS	60,824	60,646	-.3	35,786	35,310	-1.3	25,038	25,336	1.2
OTHER LIFE SCIENTISTS	8,630	10,198	18.2	6,649	7,832	17.8	1,981	2,366	19.4
PSYCHOLOGISTS	19,442	19,367	-.4	13,389	13,273	-.9	6,053	6,094	.7
SOCIAL SCIENTISTS	47,097	46,832	-.6	33,217	33,044	-.5	13,880	13,788	-.7
ECONOMISTS	12,960	13,065	.7	8,610	8,643	.4	4,358	4,422	1.5
POLITICAL SCIENTISTS	10,223	10,155	-.7	6,793	6,813	.3	3,430	3,342	-2.6
SOCIOLOGISTS	12,277	11,894	-3.1	8,564	8,331	-2.7	3,713	3,563	-4.0
OTHER SOCIAL SCIENTISTS	11,630	11,717	.7	9,253	9,257	.0	2,377	2,460	3.5

NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-36. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	204,649	207,363	1.3%	140,086	141,881	1.3%	64,563	65,482	1.4%
ENGINEERS	22,719	23,290	2.5	16,110	16,513	2.5	6,609	6,777	2.5
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	895	906	1.2	515	537	4.3	380	369	-2.9
CHEMICAL ENGINEERS	1,804	1,858	3.0	1,290	1,336	3.6	514	522	1.6
CIVIL ENGINEERS	3,745	3,945	5.3	2,998	3,120	4.1	747	825	10.4
ELECTRICAL ENGINEERS	5,121	5,372	4.9	2,966	3,161	6.6	2,155	2,211	2.6
MECHANICAL ENGINEERS	3,716	3,735	.5	2,554	2,609	2.2	1,162	1,126	-3.1
OTHER ENGINEERS	7,436	7,476	.5	5,786	5,751	-.6	1,650	1,725	4.5
PHYSICAL SCIENTISTS	18,181	17,901	-1.5	11,818	11,826	.1	6,363	6,075	-4.5
ASTRONOMERS	808	696	-13.9	603	484	-19.7	205	212	3.4
CHEMISTS	8,640	8,675	.4	5,807	5,884	1.3	2,833	2,791	-1.5
PHYSICISTS	7,659	7,668	.1	4,798	4,912	2.4	2,861	2,756	-3.7
OTHER PHYSICAL SCIENTISTS	1,074	862	-19.7	610	546	-10.5	464	316	-31.9
ENVIRONMENTAL SCIENTISTS	6,597	6,625	.4	5,227	5,314	1.7	1,370	1,311	-4.3
ATMOSPHERIC SCIENTISTS	715	871	21.8	588	770	31.0	127	101	-20.5
EARTH SCIENTISTS	3,944	3,854	-2.3	3,185	3,081	-3.3	759	773	1.8
OCEANOGRAPHERS	1,395	1,423	2.0	1,046	1,066	1.9	349	357	2.3
OTHER ENVIRONMENTAL SCIENTISTS	543	476	-12.3	408	397	-2.7	135	79	-41.5
MATHEMATICAL AND COMPUTER SCIENTISTS	15,219	16,012	5.2	11,102	11,684	5.2	4,117	4,328	5.1
MATHEMATICIANS	10,307	10,578	2.6	7,601	7,765	2.2	2,706	2,813	4.0
COMPUTER SCIENTISTS	4,912	5,434	10.6	3,501	3,919	11.9	1,411	1,515	7.4
LIFE SCIENTISTS	107,804	109,809	1.9	70,997	72,047	1.5	36,807	37,762	2.6
AGRICULTURAL SCIENTISTS	13,431	13,678	1.8	12,964	13,215	1.9	467	463	-.9
BIOLOGICAL SCIENTISTS	30,636	31,741	3.6	19,912	20,453	2.7	10,724	11,288	5.3
MEDICAL SCIENTISTS	58,515	58,298	-.4	34,095	33,637	-1.3	24,420	24,661	1.0
OTHER LIFE SCIENTISTS	5,221	6,091	16.7	4,025	4,741	17.8	1,196	1,350	12.9
PSYCHOLOGISTS	8,987	8,960	-.3	6,275	6,217	-.9	2,712	2,743	1.1
SOCIAL SCIENTISTS	25,144	24,766	-1.5	18,558	18,280	-1.5	6,586	6,486	-1.5
ECONOMISTS	7,342	7,310	-.4	5,283	5,232	-1.0	2,059	2,078	.9
POLITICAL SCIENTISTS	5,113	5,012	-2.0	3,475	3,458	-.5	1,638	1,554	-5.1
SOCIOLOGISTS	5,697	5,398	-5.2	4,298	4,077	-5.1	1,399	1,321	-5.6
OTHER SOCIAL SCIENTISTS	6,991	7,047	.8	5,502	5,514	.2	1,489	1,533	3.0

NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-37. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT UNIVERSITIES AND COLLEGES BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	59,473	60,265	1.3%	37,595	38,862	3.4%	21,878	21,403	-2.2%
ENGINEERS	6,724	7,055	4.9	3,878	4,006	3.3	2,846	3,049	7.1
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	314	325	3.5	121	142	17.4	193	183	-5.2
CHEMICAL ENGINEERS	458	532	16.2	294	342	16.3	164	190	15.9
CIVIL ENGINEERS	782	770	-1.5	588	544	-7.5	194	226	16.5
ELECTRICAL ENGINEERS	1,721	1,905	10.7	621	756	21.7	1,100	1,149	4.5
MECHANICAL ENGINEERS	862	893	3.6	444	462	4.1	418	431	3.1
OTHER ENGINEERS	2,589	2,633	1.7	1,811	1,764	-2.6	778	869	11.7
PHYSICAL SCIENTISTS	7,303	7,058	-3.4	4,072	4,100	.7	3,231	2,958	-8.4
ASTRONOMERS	408	381	-6.6	296	260	-12.2	112	121	8.0
CHEMISTS	3,111	3,060	-1.6	1,716	1,786	4.1	1,395	1,274	-8.7
PHYSICISTS	3,081	3,044	-1.2	1,587	1,644	3.6	1,494	1,400	-6.3
OTHER PHYSICAL SCIENTISTS	705	572	-18.9	474	410	-13.5	231	162	-29.9
ENVIRONMENTAL SCIENTISTS	2,995	3,034	1.3	2,289	2,373	3.7	706	661	-6.4
ATMOSPHERIC SCIENTISTS	400	545	36.2	331	489	47.7	69	56	-18.8
EARTH SCIENTISTS	1,406	1,299	-7.6	1,116	1,013	-9.2	290	286	-1.4
OCEANOGRAPHERS	930	955	2.7	637	668	4.9	293	287	-2.0
OTHER ENVIRONMENTAL SCIENTISTS	261	236	-9.6	205	204	-.5	56	32	-42.9
MATHEMATICAL AND COMPUTER SCIENTISTS	2,149	2,196	2.2	1,129	1,168	3.5	1,020	1,028	.8
MATHEMATICIANS	1,354	1,302	-3.8	647	644	-.5	707	658	-6.9
COMPUTER SCIENTISTS	795	893	12.3	483	524	8.5	312	369	18.3
LIFE SCIENTISTS	35,228	35,847	1.8	22,755	23,803	4.6	12,473	12,044	-3.4
AGRICULTURAL SCIENTISTS	6,595	6,560	-.5	6,384	6,349	-.5	211	211	.0
BIOLOGICAL SCIENTISTS	12,680	13,108	3.4	7,360	7,796	5.9	5,320	5,312	-.2
MEDICAL SCIENTISTS	15,329	15,483	1.0	8,644	9,192	6.3	6,685	6,291	-5.9
OTHER LIFE SCIENTISTS	623	699	12.2	367	469	27.8	256	230	-10.2
PSYCHOLOGISTS	1,478	1,464	-.9	922	866	-6.1	556	598	7.6
SOCIAL SCIENTISTS	3,593	3,614	.6	2,548	2,549	.0	1,045	1,065	1.9
ECONOMISTS	1,240	1,197	-3.5	924	901	-2.5	316	296	-6.3
POLITICAL SCIENTISTS	623	663	6.4	396	416	5.1	227	247	8.8
SOCIOLOGISTS	702	640	-8.8	495	446	-9.9	207	194	-6.3
OTHER SOCIAL SCIENTISTS	1,029	1,113	8.2	734	785	6.9	295	328	11.2

NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-38. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	57,780	58,729	1.6%	36,435	37,738	3.6%	21,345	20,991	-1.7%
ENGINEERS	6,607	6,938	5.0	3,807	3,936	3.4	2,800	3,002	7.2
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	304	318	4.6	114	137	20.2	190	181	-4.7
CHEMICAL ENGINEERS	451	524	16.2	289	337	16.6	162	187	15.4
CIVIL ENGINEERS	758	754	-.5	573	533	-7.0	185	221	19.5
ELECTRICAL ENGINEERS	1,690	1,871	10.7	601	737	22.6	1,089	1,134	4.1
MECHANICAL ENGINEERS	836	864	3.3	427	443	3.7	409	421	2.9
OTHER ENGINEERS	2,568	2,608	1.6	1,803	1,750	-2.9	765	858	12.2
PHYSICAL SCIENTISTS	6,956	6,743	-3.1	3,861	3,893	.8	3,095	2,850	-7.9
ASTRONOMERS	405	379	-6.4	293	258	-11.9	112	121	8.0
CHEMISTS	2,923	2,882	-1.4	1,612	1,676	4.0	1,311	1,206	-8.0
PHYSICISTS	2,969	2,951	-.6	1,527	1,591	4.2	1,442	1,360	-5.7
OTHER PHYSICAL SCIENTISTS	660	529	-19.8	429	367	-14.5	231	162	-29.9
ENVIRONMENTAL SCIENTISTS	2,891	2,925	1.2	2,197	2,271	3.4	694	654	-5.8
ATMOSPHERIC SCIENTISTS	394	539	36.8	326	484	48.5	68	55	-19.1
EARTH SCIENTISTS	1,345	1,238	-8.0	1,060	954	-10.0	285	284	-.4
OCEANOGRAPHERS	909	930	2.3	619	646	4.4	290	284	-2.1
OTHER ENVIRONMENTAL SCIENTISTS	244	218	-10.7	192	187	-2.6	52	31	-40.4
MATHEMATICAL AND COMPUTER SCIENTISTS	1,921	2,008	4.5	976	1,034	5.9	945	974	3.1
MATHEMATICIANS	1,210	1,190	-1.7	552	566	2.5	658	624	-5.2
COMPUTER SCIENTISTS	711	817	14.9	424	468	10.4	287	349	21.6
LIFE SCIENTISTS	34,755	35,386	1.8	22,423	23,451	4.6	12,332	11,935	-3.2
AGRICULTURAL SCIENTISTS	6,502	6,460	-.6	6,296	6,255	-.7	206	205	-.5
BIOLOGICAL SCIENTISTS	12,345	12,783	3.5	7,145	7,567	5.9	5,200	5,216	.3
MEDICAL SCIENTISTS	15,306	15,466	1.0	8,633	9,181	6.3	6,673	6,285	-5.8
OTHER LIFE SCIENTISTS	602	677	12.5	349	449	28.7	253	228	-9.9
PSYCHOLOGISTS	1,351	1,367	1.2	836	794	-5.0	515	573	11.3
SOCIAL SCIENTISTS	3,299	3,365	2.0	2,335	2,360	1.1	964	1,005	4.3
ECONOMISTS	1,179	1,148	-2.6	885	868	-1.9	294	280	-4.8
POLITICAL SCIENTISTS	563	607	7.8	355	376	5.9	208	231	11.1
SOCIOLOGISTS	606	563	-7.1	424	386	-9.0	182	177	-2.7
OTHER SOCIAL SCIENTISTS	952	1,046	9.9	672	729	8.5	280	317	13.2

NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-39. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	358,824	349,310	272,955	267,771	85,869	81,539	305,446	299,705
1 HARVARD UNIVERSITY	6,715	6,302	4,457	4,187	2,258	2,115	5,890	5,871
2 OHIO STATE UNIVERSITY	4,777	4,232	1,806	1,884	2,971	2,348	2,385	2,182
3 UNIV OF WIS-MADISON	3,795	3,729	3,117	3,116	678	613	3,506	3,474
4 JOHNS HOPKINS UNIVE SITY	3,521	3,488	3,329	3,327	192	161	3,395	3,404
5 UNIVERSITY OF MINNESOTA	3,329	3,534	2,862	3,003	467	531	2,791	3,012
6 LOUISIANA STATE UNIV	3,156	3,072	2,627	2,559	529	513	2,729	2,682
7 UNIV OF CAL LOS ANGELES	2,998	2,899	2,189	2,094	809	805	2,578	2,500
8 CORNELL UNIVERSITY	2,625	2,415	2,451	2,285	174	130	2,544I	2,344I
9 UNIVERSITY OF MICHIGAN	2,622	3,064	2,121	2,458	501	606	2,342	2,733
10 UNIVERSITY OF FLORIDA	2,528	2,291	2,359	2,124	169	167	2,423	2,183
TOTAL, 1ST 10 INSTS.	36,066	35,026	27,318	27,037	8,748	7,989	30,587	30,387
11 INDIANA UNIVERSITY	2,514	2,283E	1,815	1,642E	699	641E	2,022	1,846E
12 MASS INST OF TECHNOLOGY	2,456	2,097	2,200	1,896	256	201	2,330	1,996
13 UNIV OF ILL URBANA	2,412	2,563E	2,140	2,246E	272	317E	2,242	1,313E
14 UNIVERSITY OF WASHINGTON	2,408	2,520	1,828	1,941	580	579	2,115I	2,236
15 PURDUE UNIVERSITY	2,408	2,433	2,027	2,049	381	384	2,181	2,204
16 UNIV OF PENNSYLVANIA	2,385	1,896	1,569	1,546	816	350	1,751	1,672
17 PENNSYLVANIA STATE UNIV	2,336	2,283	2,085	2,071	251	212	2,201	2,171
18 TEXAS A & M UNIVERSITY	2,300	2,279	2,300	2,279	0	0	2,300	2,279
19 COLUMBIA UNIV MAIN DIV	2,234	2,227	1,770	1,766	464	461	1,928	1,919
20 UNIV OF CAL BERKELEY	2,230	2,315	1,488	1,504	742	811	1,814	1,884
TOTAL, 1ST 20 INSTS.	59,749	57,922	46,540	45,977	13,209	11,945	51,473	49,910
21 UNIV OF CAL SAN FRANCISCO	2,169	2,113	1,449	1,332	720	781	1,799	1,741
22 UNIVERSITY OF PITTSBURGH	2,110E	2,042E	1,780E	1,733E	330E	309E	1,945E	1,887E
23 NEW YORK UNIVERSITY	2,095	2,086	1,405	1,392	690	694	1,597	1,620I
24 UNIV OF CAL DAVIS	2,005	2,033	1,554	1,562	451	471	1,799	1,813
25 UNIVERSITY OF IOWA	1,996	1,911	1,663	1,594	333	317	1,814	1,781
26 UNIVERSITY OF UTAH	1,989	2,022	1,757	1,784	232	238	1,837	1,872
27 HOWARD UNIVERSITY	1,953	1,631I	1,017	979I	936	652I	1,261	1,129I
28 YALE UNIVERSITY	1,917	2,305	1,746	1,910	171	395	1,832	2,113
29 N C STATE UNIV AT RALEIGH	1,856	1,755	1,725	1,622	131	133	1,775	1,670
30 UNIV OF TEXAS AT AUSTIN	1,854	1,814	1,624	1,569	230	245	1,737	1,684
TOTAL, 1ST 30 INSTS.	79,693	77,634	62,260	61,454	17,433	16,180	68,870	67,223
31 UNIVERSITY OF KENTUCKY	1,838	2,166	1,646	1,892	192	274	1,708	1,984
32 MICHIGAN STATE UNIVERSITY	1,794	1,811	1,694	1,701	100	110	1,734	1,748
33 WASHINGTON UNIVERSITY	1,713	1,661	1,567	1,530	146	131	1,625	1,585
34 UNIVERSITY OF ARIZONA	1,652	1,543	1,468	1,392	184	151	1,544	1,457
35 UNIV OF SOUTHERN CAL	1,652I	1,606E	1,296I	1,274E	356I	332E	1,406I	1,368
36 UNIV OF CAL SAN DIEGO	1,642	1,565	1,329	1,270	313	295	1,491	1,436
37 CASE WESTERN RESERVE UNIV	1,639	1,549	1,367	1,307	272	242	1,459	1,393
38 DUKE UNIVERSITY	1,596	1,653E	1,502	1,563E	94	90E	1,555	1,601E
39 RUTGERS THE ST UNIV OF NJ	1,573	1,602	1,522	1,564	51	38	1,538	1,574
40 UNIVERSITY OF CONNECTICUT	1,571	1,593	1,307	1,337	264	256	1,396	1,452
TOTAL, 1ST 40 INSTS.	96,363	94,383	76,958	76,284	19,405	18,099	84,329	82,824
41 UNIVERSITY OF COLORADO	1,555	1,583	1,416	1,425	139	158	1,476	1,491
42 UNIV OF MD COLLEGE PARK	1,503	1,434	1,276	1,207	227	227	1,359	1,320
43 CUNY MT SINAI SCH OF MED	1,503I	1,462I	1,213I	1,192I	290I	270I	1,301I	1,266I
44 NORTHEASTERN UNIVERSITY	1,499I	1,432	690I	678	809I	754	1,004I	961
45 NORTHWESTERN UNIVERSITY	1,493	1,307	1,252	1,111	241	196	1,330	1,206
46 IOWA ST U OF SCI & TECH	1,483	1,435	1,358	1,300	125	135	1,434	1,376
47 STANFORD UNIVERSITY	1,382	1,362	1,092	1,102	290	260	1,050I	1,095
48 WAYNE STATE UNIVERSITY	1,373	1,627	1,050	1,088	323	539	1,164	1,293
49 BOSTON UNIVERSITY	1,372	1,310	885	886	487	424	1,044	1,020
50 UNIVERSITY OF CHICAGO	1,342	1,399	1,255	1,320	87	79	1,229	1,333
TOTAL, 1ST 50 INSTS.	110,868	108,734	88,445	87,593	22,423	21,141	96,719	95,186

SEE FOOTNOTES AT END OF TABLE.

TABLE B-39. -- SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 UNIVERSITY OF KANSAS	1,335	1,554I	1,287	1,272I	48	282I	1,297I	1,427I
52 UNIV OF MISSOURI COLUMBIA	1,333	1,351	1,196	1,240	137	111	1,243	1,281
53 UNIVERSITY OF CINCINNATI	1,333	1,348	1,115	1,123	218	225	1,179	1,187
54 TEMPLE UNIVERSITY	1,330	1,312	1,103	1,120	227	192	1,301I	1,271I
55 UNIV OF HAWAII-MANOA	1,316	1,323	1,023	1,043	293	280	1,138	1,145
56 CMTY COL ALLEGHENY COUNTY	1,311I	1,161I	1011	981	1,210I	1,063I	995I	881I
57 UNIV ALABAMA BIRMINGHAM	1,273	1,192	1,103	1,049	170	143	1,144	1,088
58 UNIV OF MD BALT PROF SCH	1,272	1,024E	818	646E	454	378E	1,018	761E
59 UNIVERSITY OF MIAMI	1,264E	1,171	1,165E	1,074	99E	97E	1,198	1,111
60 KANS ST U - AG & APP SCI	1,248	1,237	1,054	1,050	194	187	1,153	1,145
TOTAL, 1ST 60 INSTS.	123,883	121,407	98,410	97,308	25,473	24,099	108,363	106,488
61 GEORGE WASHINGTON UNIV	1,240	1,140	639	612	601	528	859	824
62 UNIVERSITY OF ROCHESTER	1,240	1,199E	1,189	1,129E	51	70E	1,208	1,147E
63 U TEX HLTH SCI CTR DALLAS	1,237	1,049	940	778	297	271	1,037	865
64 UNIV OF NC AT CHAPEL HILL	1,228	1,239	1,194	1,206	34	33	1,211	1,222
65 SUNY AT STONY BROOK	1,226	1,166	1,094	1,052	132	114	1,143	1,090
66 SUNY AT BUFFALO	1,222	1,194	901	890	321	304	1,009	985
67 OREGON STATE UNIVERSITY	1,211	1,155	1,057	1,042	154	113	1,104	1,100
68 UNIVERSITY OF GEORGIA	1,196	1,172	1,144	1,124	52	48	1,168	1,146
69 NEW MEXICO STATE UNIV	1,189	1,151	1,116	1,071	73	80	1,150	1,110
70 GEORGIA INSTITUTE OF TECH	1,187	1,156	1,094	1,055	93	101	1,125	1,103E
TOTAL, 1ST 70 INSTS.	136,059	133,028	108,778	107,267	27,281	25,761	119,405	117,083
71 U TEX HLTH SCI CTR S ANTO	1,183	1,070	939	926	244	144	1,036	971
72 WEST VIRGINIA UNIVERSITY	1,168	1,156	1,057	1,021	111	135	1,097	1,077
73 AUBURN UNIVERSITY	1,136	1,026	1,041	935	95	91	1,083	979
74 UNIVERSITY OF OKLAHOMA	1,133	1,077	966	917	167	160	1,058I	921
75 UNIV OF SOUTH CAROLINA	1,122	1,178	992	1,032	130	146	1,022	1,086
76 YESHIVA UNIVERSITY	1,122E	1,122	866E	866E	256E	256E	988E	988
77 U TEX HLTH SCI CTR HOUSTN	1,115	1,103	954	886	161	217	1,020	975
78 UNIVERSITY OF NEW MEXICO	1,103	1,290	792	952	311	338	934	1,092
79 UNIVERSITY OF VIRGINIA	1,101	1,127	1,042	1,047	59	80	1,034I	1,065I
80 VA POLYTECH INST & ST U	1,095	1,097	1,086	1,089	9	8	1,093	1,092
TOTAL, 1ST 80 INSTS.	147,337	144,274	118,513	116,938	28,824	27,336	129,772	127,332
81 VANDERBILT UNIVERSITY	1,053	1,035	889	892	164	143	915	921
82 COLORADO STATE UNIVERSITY	1,050	1,084	1,011	1,037	39	47	1,011	1,039
83 COL OF MED & DENT OF N J	989I	985E	756I	754E	233I	231E	851I	848E
84 EMORY UNIVERSITY	977I	952I	820I	806I	157I	146I	859I	837I
85 SOUTHERN ILL U-CARBONDALE	967	982	801	793	166	189	849	847
86 UNIV OF CAL IRVINE	963	895	771	699	192	196	857	894
87 VIRGINIA COMMONWLTH UNIV	929	899	849	832	80	67	883	862
88 U TENNESSEE KNOXVILLE	929	977	829	850	100	127	869	901
89 GEORGETOWN UNIVERSITY	918	903	849	833	69	70	884	867
90 BAYLOR COL OF MEDICINE	918	892	792	769	126	123	769	794E
TOTAL, 1ST 90 INSTS.	157,030	153,878	126,880	125,203	30,150	28,675	138,522	136,146
91 UNIV OF ILL MED CTR CHGO	912	997	646	722	266	275	755	838
92 WASHINGTON STATE UNIV	905I	901	469I	468	436I	433	714I	710I
93 UNIV OF P R-RIO PIEDRAS	900	943	779	849	121	94	822E	898
94 CLEMSON UNIVERSITY	896I	894	884I	882	12I	12	889I	888
95 MED UNIV OF SO CAROLINA	886	931E	778	770E	108	161E	613	729
96 UNIVERSITY OF LOUISVILLE	865	805	672	595	193	210	723	658
97 NEW YORK MEDICAL COLLEGE	864	854	630	619	234	235	739	673
98 U TEXAS SYSTEM CANCER CTR	863	890	799	839	64	51	834	865
99 SUNY DOWNSTATE MED CTR	836I	833I	695I	693I	141I	140I	752I	749I
100 UNIV OF MASS AT AMHERST	830	830	785	785	45	45	807	807
TOTAL, 1ST 100 INSTS.	165,787	162,756	134,017	132,425	31,770	30,331	146,173	143,963

SEE FOOTNOTES AT END OF TABLE.

TABLE B-39. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1982 AND JANUARY 1983 - CONTINUED

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
101 TUFTS UNIVERSITY	811I	773	350I	344	461I	429	503I	482
102 U OF ARKANSAS MED SCI CAM	808	805	729	731	79	74	756	755
103 THE OREG HLTH SCI UNIV	784I	781I	516I	515I	268I	266I	612I	610I
104 UNIV OF NEBRASKA-LINCOLN	780	954	753	800	27	154	769	905
105 TEXAS TECH UNIVERSITY	773	750	653	630	120	120	694	684
106 OKLAHOMA STATE UNIVERSITY	773	774	724	705	49	69	749	740
107 CALIF ST UNIV LONG BEACH	763	580I	388	329I	375	251I	514	410I
108 UNIVERSITY OF MISSISSIPPI	739	747	600	614	139	133	142	635I
109 ARIZONA STATE UNIVERSITY	736	759	725	725	11	34	721	737
110 UNIV OF SOUTH FLORIDA	709I	706	585I	583	124I	123	623I	621
TOTAL, 1ST 110 INSTS.	173,463	170,385	140,040	138,401	33,423	31,984	152,260	150,545
111 MISSISSIPPI STATE UNIV	709	724	689	700	20	24	699	712
112 PHILA COL OSTEOPATHIC MED	705	566	108	103	597	463	167	164
113 LOYOLA UNIV - CHICAGO	705	697	427	412	278	285	526	507
114 UNIV OF ARK FAYETTEVILLE	702	677	645	609	57	68	649	651
115 INTER AM U PR-SAN GERMAN	698	599	259	235	439	364	448	398
116 FLORIDA STATE UNIVERSITY	691	681	666	651	25	30	682	663
117 UNIV TENN CTR HEALTH SCI	688	719	528	552	160	167	568	595
118 SAN DIEGO STATE UNIV	682	568I	500	384I	182	184I	558	433I
119 SAN JOSE STATE UNIVERSITY	660	684	374	372	286	312	424	409
120 U OF CAL SYS WIDE PRGMS	658	117	622	111	36	6	637	113
TOTAL, 1ST 120 INSTS.	180,361	176,417	144,858	142,530	35,503	33,887	157,619	155,192
121 U OF HOUSTON CENTRAL CAM	656	672	501	516	155	156	541	570
122 FAIRLEIGH DICKINSON UNIV	655	746E	264	292E	391	454E	365	416E
123 CITY COLLEGES OF CHICAGO	653	659	653	659	0	0	653	659I
124 BRIGHAM YOUNG UNIVERSITY	647	656	576	580	71	76	598	602
125 UNIV OF CAL RIVERSIDE	645	698	575	594	70	104	612	666
126 UNIVERSITY OF IDAHO	644	623	609	589	35	34	628	606
127 LOMA LINDA UNIVERSITY	642E	719I	450E	482I	192E	237I	549I	614I
128 CUNY NY CITY TECH COL	640	400	460	239	180	161	527I	299
129 UNIV OF CAL SANTA BARBARA	633	575	455	423	178	152	542	503
130 CUYAHOGA CMTY COL DIST	631I	573I	196I	191I	435I	382I	358I	326I
TOTAL, 1ST 130 INSTS.	186,807	182,738	149,597	147,095	37,210	35,643	162,996	160,455
131 CARNEGIE-MELLON UNIV	629I	613I	555I	546I	74I	69I	587I	574I
132 SUNY NASSAU CNTY COLLEGE	629	421	269	242	360	179	352	363I
133 ST LOUIS COMMUNITY COL	624I	571	240I	234	384I	337	383I	352
134 INTER AM U PR-CTRL OFF	621	570	239	254	382	316	372	379I
135 CAL POLY ST U SAN LUIS OB	620	615	507	520	113	95	544	550
136 SYRACUSE UNIVERSITY	618	575	496	498	122	77	552	534
137 UNIV OF VT & ST AGRIC COL	613	628	571	575	42	53	587	595
138 UNIV OF P R-MED SCI CMPUS	610	592	522	509	88	83	522	560
139 DARTMOUTH COLLEGE	608	620	356	313	252	307	392	391
140 TULANE UNIVERSITY	597	591	526	528	71	63	548	548
TOTAL, 1ST 140 INSTS.	192,976	188,536	153,878	151,314	39,098	37,222	167,838	165,304
141 ST LOUIS UNIVERSITY	590	609	489	490	101	119	523	530
142 MONTANA STATE UNIVERSITY	586	541I	485	475I	101	66I	526	509I
143 UNIVERSITY OF DELAWARE	583	585	566	567	17	18	574	576
144 NORTHERN VA COMMUNITY COL	582	554	225	223	357	331	329	330
145 UNIV OF ILL CHICAGO CIR	581	613	510	528	71	85	531	556
146 SAN FRANCISCO STATE UNIV	559	443	299	245	260	198	409	320
147 CALIF ST POLY UNIV POMONA	547	541	334	316	213	225	401	394
148 PRINCETON UNIVERSITY	547	554	501	504	46	50	527	532
149 UNIV OF WIS-MILWAUKEE	545	560	304	411	241	149	413	461
150 CALIFORNIA INST OF TECH	540	545	526	528	14	17	534	537
TOTAL, 1ST 150 INSTS.	198,636	194,081	158,117	155,601	40,519	38,480	172,607	170,051

SEE FOOTNOTES AT END OF TABLE.

TABLE B-39. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
151 UNIVERSITY OF WYOMING	539	609	511	570	28	39	525	589
152 CALIF ST UNIV FULLERTON	537	498	268	268	269	230	347I	302
153 MIAMI-DADE CMTY COLLEGE	536	549	317	326	219	223	411	427
154 LONG ISLAND UNIVERSITY	529I	509I	308I	303I	221I	206I	388I	373I
155 MARQUETTE UNIVERSITY	517	553	293	307	224	246	367	386
156 CALIF ST UNIV SACRAMENTO	517	534I	371	386I	146	148I	421	432I
157 SUNY AT ALBANY	506	493	430	424	76	69	453	444
158 SINCLAIR COMMUNITY COL	504	449	160	152	344	297	253	224E
159 SOUTH DAKOTA STATE UNIV	502I	501	481I	480	21I	21	492I	492
160 MONTGOMERY COLLEGE	499I	455I	171I	167I	328I	288I	294I	270I
TOTAL, 1ST 160 INSTS.	203,822	199,231	161,427	158,984	42,395	40,247	176,562	173,994
161 MEDICAL COL OF GEORGIA	497	630	393	480	104	150	436	555
162 WAKE FOREST UNIVERSITY	497	479	489	466	8	13	492	470
163 CALIF ST UNIV NORTHRIDGE	487E	487	304E	304	183E	183	353E	353
164 KENT STATE UNIVERSITY	486	488	422	436	64	52	450	453
165 NORTH DAKOTA STATE UNIV	485	487	464	480	21	7	472	484
166 OHIO UNIVERSITY	480	467	386	372	94	95	433	416
167 WRIGHT STATE UNIVERSITY	474	523	392	433	82	90	394	439
168 EAST CAROLINA UNIVERSITY	473	473	413	413	60	60	466	457
169 U TEX MED BRNCH GALVESTON	471	450	471	450	0	0	471	450
170 CHEYNEY STATE COLLEGE	469I	456	469I	456	0I	0	469I	456
TOTAL, 1ST 170 INSTS.	208,641	204,171	165,630	163,274	43,011	40,897	181,002	178,529
171 UTAH STATE UNIVERSITY	467	451	441	416	26	35	452	432
172 ROCKEFELLER UNIVERSITY	456	432	435	413	21	19	443	423
173 CUNY QUEENS COLLEGE	445I	427	263I	256	182I	171	341I	328
174 NEW YORK INST TECHNOLOGY	444I	424	201I	198	243I	226	286I	274
175 CALIF ST UNIV LOS ANGELES	442	444	247	251	195	193	314	318
176 UNIV OF MAINE ORONO	439	436	404	406	35	30	421	419
177 RENSSELAER POLYTECH INST	435	427	405	391	30	36	415	404
178 CALIF STATE UNIV FRESNO	433	415	316	310	117	105	348I	342E
179 CUNY CITY COLLEGE	432I	430	351I	350	81I	80	381I	379
180 MIAMI UNIVERSITY (OHIO)	431	362	355	344	76	18	380	351
TOTAL, 1ST 180 INSTS.	213,065	208,419	169,048	166,609	44,017	41,810	184,787	182,202
181 FLORIDA INST OF TECH	426	376	155	157	271	219	241	244
182 ROCHESTER INST TECHNOLOGY	426	417	212	212	214	205	284	204
183 N J INST OF TECHNOLOGY	425	392	275	265	150	127	304	302
184 UNIVERSITY OF DAYTON	423	443	319	350	104	93	170	375
185 THE UNIVERSITY OF ALABAMA	421	420	384	365	37	55	402	359
186 UNIV OF RHODE ISLAND	418	418	418	418	0	0	418	418
187 SAN ANTONIO CMTY COL DIST	417I	390	244I	238	173I	152	350I	328I
188 U OF NEB MED CTR AT OMAHA	414I	412I	346I	345I	68I	67I	372I	370I
189 YOUNGSTOWN ST UNIVERSITY	413	349	223	202	190	147	223	263
190 CUNY BROOKLYN COLLEGE	411	411	263	262	148	149	321	314
TOTAL, 1ST 190 INSTS.	217,259	212,447	171,887	169,423	45,372	43,024	187,875	185,382
191 ILLINOIS STATE UNIVERSITY	411	420	341	364	70	56	357	386
192 US AIR FORCE ACADEMY	406I	390	406I	390	0I	0	406I	390
193 UNIVERSITY OF NOTRE DAME	402	402	372	364	30	38	390	383
194 NORTHERN ILLINOIS UNIV	400	398	348	351	52	47	372	370
195 UNIVERSITY OF TOLEDO	399	379	293	274	106	105	333	315
196 INST OF AGRI UNIV OF TENN	399	405	399	405	0	0	399	405
197 UNIVERSITY OF N DAKOTA	395	386	351	332	44	54	366	346
198 UNIV OF NEW HAMPSHIRE	392	391	377	374	15	17	387	386
199 BROWN UNIVERSITY	391	396	371	372	20	24	381	383
200 UNIV OF TEX AT ARLINGTON	388	400	309	316	79	84	334	343
TOTAL, 1ST 200 INSTS.	221,242	216,414	175,454	172,965	45,788	43,449	191,604	189,091
TOTAL, ALL OTHER INSTS.	137,582	132,896	97,501	94,806	40,081	38,090	113,841	110,613

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-40. -- SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	236,560	232,043	191,731	188,742	44,829	43,301	207,362	204,649
1 HARVARD UNIVERSITY	6,715	6,302	4,457	4,187	2,258	2,115	5,890	5,871
2 OHIO STATE UNIVERSITY	4,777	4,232	1,806	1,884	2,971	2,348	2,388	2,182
3 UNIV OF WIS-MADISON	3,795	3,729	3,117	3,116	678	613	3,506	3,474
4 JOHNS HOPKINS UNIVERSITY	3,521	3,488	3,329	3,327	192	161	3,395	3,404
5 UNIVERSITY OF MINNESOTA	3,329	3,534	2,862	3,003	467	531	2,791	3,012
6 LOUISIANA STATE UNIV	3,156	3,072	2,627	2,559	529	513	2,729	2,682
7 UNIV OF CAL LOS ANGELES	2,998	2,899	2,189	2,094	809	805	2,578	2,500
8 CORNELL UNIVERSITY	2,625	2,415	2,451	2,285	174	130	2,544I	2,344I
9 UNIVERSITY OF MICHIGAN	2,622	3,064	2,121	2,458	501	606	2,342	2,733
10 UNIVERSITY OF FLORIDA	2,528	2,291	2,359	2,124	169	167	2,423	2,183
TOTAL, 1ST 10 INSTS.	36,066	35,026	27,318	27,037	8,748	7,989	30,587	30,387
11 INDIANA UNIVERSITY	2,514	2,283E	1,815	1,642E	699	641E	2,022	1,846E
12 MASS INST OF TECHNOLOGY	2,456	2,097	2,200	1,896	256	201	2,330	1,996
13 UNIV OF ILL URBANA	2,412	2,563E	2,140	2,246E	272	317E	2,242	1,313E
14 UNIVERSITY OF WASHINGTON	2,408	2,520	1,828	1,941	580	579	2,115I	2,236
15 PURDUE UNIVERSITY	2,408	2,433	2,027	2,049	381	384	2,181	2,204
16 UNIV OF PENNSYLVANIA	2,385	1,896	1,569	1,546	816	350	1,751	1,672
17 PENNSYLVANIA STATE UNIV	2,336	2,283	2,085	2,071	251	212	2,201	2,171
18 TEXAS A & M UNIVERSITY	2,300	2,279	2,300	2,279	0	0	2,300	2,279
19 COLUMBIA UNIV MAIN DIV	2,234	2,227	1,770	1,766	464	461	1,928	1,919
20 UNIV OF CAL BERKELEY	2,230	2,315	1,488	1,504	742	811	1,814	1,884
TOTAL, 1ST 20 INSTS.	59,749	57,922	46,540	45,977	13,209	11,945	51,473	49,910
21 UNIV OF CAL SAN FRANCISCO	2,169	2,113	1,449	1,332	720	781	1,799	1,741
22 UNIVERSITY OF PITTSBURGH	2,110E	2,042E	1,780E	1,733E	330E	309E	1,945E	1,887E
23 NEW YORK UNIVERSITY	2,095	2,086	1,405	1,392	690	694	1,597	1,620I
24 UNIV OF CAL DAVIS	2,005	2,033	1,554	1,562	451	471	1,799	1,813
25 UNIVERSITY OF IOWA	1,996	1,911	1,663	1,594	333	317	1,814	1,781
26 UNIVERSITY OF UTAH	1,989	2,022	1,757	1,784	232	238	1,837	1,872
27 HOWARD UNIVERSITY	1,953	1,631I	1,017	979I	936	652I	1,261	1,129I
28 YALE UNIVERSITY	1,917	2,305	1,746	1,910	171	395	1,832	2,113
29 N C STATE UNIV AT RALEIGH	1,856	1,755	1,725	1,622	131	133	1,775	1,670
30 UNIV OF TEXAS AT AUSTIN	1,854	1,814	1,624	1,569	230	245	1,737	1,684
TOTAL, 1ST 30 INSTS.	79,693	77,634	62,260	61,454	17,433	16,180	68,870	67,223
31 UNIVERSITY OF KENTUCKY	1,838	2,166	1,646	1,892	192	274	1,708	1,984
32 MICHIGAN STATE UNIVERSITY	1,794	1,811	1,694	1,701	100	110	1,734	1,748
33 WASHINGTON UNIVERSITY	1,713	1,661	1,567	1,530	146	131	1,625	1,585
34 UNIV OF SOUTHERN CAL	1,652I	1,606E	1,296I	1,274E	356I	332E	1,406I	1,368
35 UNIVERSITY OF ARIZONA	1,652	1,543	1,468	1,392	184	151	1,544	1,457
36 UNIV OF CAL SAN DIEGO	1,642	1,565	1,329	1,270	313	295	1,491	1,436
37 CASE WESTERN RESERVE UNIV	1,639	1,549	1,367	1,307	272	242	1,459	1,393
38 DUKE UNIVERSITY	1,596	1,653E	1,502	1,563E	94	90E	1,555	1,601E
39 RUTGERS THE ST UNIV OF NJ	1,573	1,602	1,522	1,564	51	38	1,538	1,574
40 UNIVERSITY OF CONNECTICUT	1,571	1,593	1,307	1,337	264	256	1,396	1,452
TOTAL, 1ST 40 INSTS.	96,363	94,383	76,958	76,284	19,405	18,099	84,329	82,824
41 UNIVERSITY OF COLORADO	1,555	1,583	1,416	1,425	139	158	1,476	1,491
42 CUNY MT SINAI SCH OF MED	1,503I	1,462I	1,213I	1,192I	290I	270I	1,301I	1,266I
43 UNIV OF MD COLLEGE PARK	1,503	1,434	1,276	1,207	227	227	1,355	1,320
44 NORTHEASTERN UNIVERSITY	1,499I	1,432	690I	678	809I	754	1,004I	961
45 NORTHWESTERN UNIVERSITY	1,493	1,307	1,252	1,111	241	196	1,330	1,206
46 IOWA ST U OF SCI & TECH	1,483	1,435	1,358	1,300	125	135	1,434	1,376
47 STANFORD UNIVERSITY	1,382	1,362	1,092	1,102	290	260	1,050I	1,095
48 WAYNE STATE UNIVERSITY	1,373	1,627	1,050	1,088	323	539	1,164	1,293
49 BOSTON UNIVERSITY	1,372	1,310	885	886	487	424	1,044	1,020
50 UNIVERSITY OF CHICAGO	1,342	1,399	1,255	1,320	87	79	1,229	1,333
TOTAL, 1ST 50 INSTS.	110,668	108,734	88,445	87,593	22,423	21,141	96,719	95,186

SEE FOOTNOTES AT END OF TABLE.

TABLE B-40. -- SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 UNIVERSITY OF KANSAS	1,335	1,554I	1,287	1,272I	48	282I	1,297I	1,427I
52 UNIVERSITY OF CINCINNATI	1,333	1,348	1,115	1,123	218	225	1,179	1,187
53 UNIV OF MISSOURI COLUMBIA	1,333	1,351	1,196	1,240	137	111	1,243	1,281
54 TEMPLE UNIVERSITY	1,330	1,312	1,103	1,120	227	192	1,301I	1,271I
55 UNIV OF HAWAII-MANOA	1,316	1,323	1,023	1,043	293	280	1,138	1,145
56 UNIV ALABAMA BIRMINGHAM	1,273	1,192	1,103	1,049	170	143	1,144	1,088
57 UNIV OF MD BALT PROF SCH	1,272	1,024E	818	646E	454	378E	1,018	761E
58 UNIVERSITY OF MIAMI	1,264E	1,171	1,165E	1,074	99E	97E	1,198	1,111
59 KANS ST U - AG & APP SCI	1,248	1,237	1,054	1,050	194	187	1,153	1,145
60 GEORGE WASHINGTON UNIV	1,240	1,140	639	612	601	528	859	824
TOTAL, 1ST 60 INSTS.	123,812	121,386	98,948	97,822	24,864	23,564	108,253	106,430
61 UNIVERSITY OF ROCHESTER	1,240	1,199E	1,189	1,129E	51	70E	1,208	1,147E
62 U TEX HLTH SCI CTR DALLAS	1,237	1,049	940	778	297	271	1,037	865
63 UNIV OF NC AT CHAPEL HILL	1,228	1,239	1,194	1,206	34	33	1,211	1,222
64 SUNY AT STONY BROOK	1,226	1,166	1,094	1,052	132	114	1,143	1,090
65 SUNY AT BUFFALO	1,222	1,194	901	890	321	304	1,009	985
66 OREGON STATE UNIVERSITY	1,211	1,155	1,057	1,042	154	113	1,104	1,100
67 UNIVERSITY OF GEORGIA	1,196	1,172	1,144	1,124	52	48	1,168	1,146
68 NEW MEXICO STATE UNIV	1,189	1,151	1,116	1,071	73	80	1,150	1,110
69 GEORGIA INSTITUTE OF TECH	1,187	1,156	1,094	1,055	93	101	1,125	1,103E
70 U TEX HLTH SCI CTR S ANTO	1,183	1,070	939	926	244	144	1,036	971
TOTAL, 1ST 70 INSTS.	135,931	132,937	109,616	108,095	26,315	24,842	119,445	117,172
71 WEST VIRGINIA UNIVERSITY	1,168	1,156	1,057	1,021	111	135	1,097	1,077
72 AUBURN UNIVERSITY	1,136	1,026	1,041	935	95	91	1,083	979
73 UNIVERSITY OF OKLAHOMA	1,133	1,077	966	917	167	160	1,058I	921
74 YESHIVA UNIVERSITY	1,122E	1,122	866E	866E	256E	256E	988E	988
75 UNIV OF SOUTH CAROLINA	1,122	1,178	992	1,032	130	146	1,022	1,086
76 U TEX HLTH SCI CTR HOUSTN	1,115	1,103	954	886	161	217	1,020	975
77 UNIVERSITY OF NEW MEXICO	1,103	1,290	792	952	311	338	934	1,092
78 UNIVERSITY OF VIRGINIA	1,101	1,127	1,042	1,047	59	80	1,034I	1,065I
79 VA POLYTECH INST & ST U	1,095	1,097	1,086	1,089	9	8	1,093	1,092
80 VANDERBILT UNIVERSITY	1,053	1,035	889	892	164	143	915	921
TOTAL, 1ST 80 INSTS.	147,079	144,148	119,301	117,732	27,778	26,416	129,692	127,371
81 COLORADO STATE UNIVERSITY	1,050	1,084	1,011	1,037	39	47	1,011	1,039
82 COL OF MED & DENT OF N J	989I	985E	756I	754E	233I	231E	851I	848E
83 EMORY UNIVERSITY	977I	952I	820I	806I	157I	146I	859I	837I
84 SOUTHERN ILL U-CARBONDALE	967	982	801	793	166	189	849	847
85 UNIV OF CAL IRVINE	963	895	771	699	192	196	857	894
86 VIRGINIA COMMONWLTH UNIV	929	899	849	832	80	67	883	862
87 U TENNESSEE KNOXVILLE	929	977	829	850	100	127	869	901
88 GEORGETOWN UNIVERSITY	918	903	849	833	69	70	884	869
89 BAYLOR COL OF MEDICINE	918	892	792	769	126	123	769	794E
90 UNIV OF ILL MED CTR CHGO	912	997	646	722	266	275	755	838
TOTAL, 1ST 90 INSTS.	156,631	153,714	127,425	125,827	29,206	27,887	138,282	136,103
91 WASHINGTON STATE UNIV	905I	901	469I	468	436I	433	714I	710I
92 UNIV OF P R-RIO PIEDRAS	900	943	779	849	121	94	822E	898
93 CLEMSON UNIVERSITY	896I	894	884I	882	12I	12	889I	888
94 MED UNIV OF SO CAROLINA	886	931E	778	770E	108	161E	613	729
95 UNIVERSITY OF LOUISVILLE	865	805	672	595	193	210	723	658
96 NEW YORK MEDICAL COLLEGE	864	854	630	619	234	235	739	673
97 U TEXAS SYSTEM CANCER CTR	863	890	799	839	64	51	834	865
98 SUNY DOWNSTATE MED CTR	836I	833I	695I	693I	141I	140I	752I	749I
99 UNIV OF MASS AT AMHERST	830	830	785	785	45	45	807	807
100 TUFTS UNIVERSITY	811I	773	350I	344	461I	429	503I	482
TOTAL, 1ST 100 INSTS.	165,287	162,368	134,266	132,671	31,021	29,697	145,681	143,563
TOTAL, ALL OTHER INSTS.	71,273	69,675	57,465	56,071	13,808	13,604	61,681	61,085

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-41. -- ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	26,167	25,465	21,849	21,318	4,318	4,147	23,290	22,718
1 JOHNS HOPKINS UNIVERSITY	973	967	963	955	10	12	968	962
2 MASS INST OF TECHNOLOGY	833	692	756	628	77	64	795	660
3 GEORGIA INSTITUTE OF TECH	724	727	667	660	57	67	686	694E
4 PENNSYLVANIA STATE UNIV	654	659	622	624	32	35	631	636
5 PURDUE UNIVERSITY	634	633	533	532	101	101	575	597E
6 UNIV OF CAL BERKELEY	458	427	317	305	141	122	386	367
7 TEXAS A & M UNIVERSITY	412	418	412	418	0	0	412	418
8 UNIV OF ILL URBANA	408	423	377	387	31	36	387	208
9 UNIVERSITY OF MICHIGAN	407	423	334	336	73	87	377	384
10 STANFORD UNIVERSITY	403	375	277	280	126	95	279	291
TOTAL, 1ST 10 INSTS.	5,906	5,744	5,258	5,125	648	619	5,499	5,217
11 IOWA ST U OF SCI & TECH	389	385	363	349	26	36	377	364
12 UNIV OF WIS-MADISON	369	364	309	309	60	55	342	336
13 CORNELL UNIVERSITY	352	328	340	315	12	13	351I	327I
14 N C STATE UNIV AT RALEIGH	345	313	314	291	31	22	324	299
15 VA POLYTECH INST & ST U	320	312	316	309	4	3	319	311
16 OHIO STATE UNIVERSITY	316	335	250	246	66	89	270	272
17 UNIVERSITY OF WASHINGTON	304	309	263	275	41	34	282	292
18 UNIV OF TEXAS AT AUSTIN	294	270	242	229	52	41	263	245
19 NORTHEASTERN UNIVERSITY	282I	270	156I	153	126I	117	205I	197
20 UNIV OF MD COLLEGE PARK	270	251	193	190	77	61	207	203
TOTAL, 1ST 20 INSTS.	9,147	8,881	8,004	7,791	1,143	1,090	8,442	8,066
21 U TENNESSEE KNOXVILLE	263	283	237	251	26	32	248	265
22 UNIV OF PENNSYLVANIA	246	119	86	85	160	34	111	94
23 UNIVERSITY OF MINNESOTA	244	254	193	197	51	57	211	214
24 UNIV OF CAL LOS ANGELES	241	252	174	188	67	64	202	218
25 RENSSELAER POLYTECH INST	236	223	219	205	17	18	225	212
26 UNIVERSITY OF FLORIDA	235	226	221	220	14	6	227	222
27 CARNEGIE-MELLON UNIV	227I	221I	177I	175I	50I	46I	198I	193I
28 POLYTECHNIC INST OF N Y	227	215	120	128	107	87	156	146
29 AUBURN UNIVERSITY	225	173	213	171	12	2	219	172
30 N J INST OF TECHNOLOGY	219	210	143	138	76	72	143	156
TOTAL, 1ST 30 INSTS.	11,510	11,057	9,787	9,549	1,723	1,508	10,383	9,960
31 ARIZONA STATE UNIVERSITY	214	194	210	182	4	12	212	185
32 UNIVERSITY OF CINCINNATI	212	207	135	132	77	75	155	151
33 NEW MEXICO STATE UNIV	208	219	197	198	11	21	202	209
34 UNIV OF MISSOURI ROLLA	204	186	198	185	6	1	201	185
35 KANS ST U - AG & APP SCI	197	185	154	147	43	38	177	169
36 UNIVERSITY OF UTAH	194	197	150	152	44	45	166	169
37 GEORGE WASHINGTON UNIV	191	187	62	68	129	119	95	111
38 UNIVERSITY OF NEW MEXICO	188	232	120	162	68	70	149	192
39 U OF HOUSTON CENTRAL CAM	187	180	120	112	67	68	140	134
40 UNIVERSITY OF PITTSBURGH	183E	180	161E	156	22E	24	172E	168
TOTAL, 1ST 40 INSTS.	13,488	13,024	11,294	11,043	2,194	1,981	12,055	11,635
41 OKLAHOMA STATE UNIVERSITY	180	162	159	147	21	15	169	156
42 COLORADO STATE UNIVERSITY	173	176	162	165	11	11	162	165
43 UNIVERSITY OF DAYTON	172	160	125	122	47	38	61	133
44 NORTHWESTERN UNIVERSITY	172	167	160	159	12	8	160	162
45 UNIVERSITY OF CONNECTICUT	172	153	138	139	34	14	156	148
46 LOUISIANA STATE UNIV	169	164	155	149	14	15	156	153
47 UNIVERSITY OF ARIZONA	166	159	156	150	10	9	160	154
48 ILLINOIS INST OF TECH	165	147	104	92	61	55	124	111
49 CLEMSON UNIVERSITY	163I	162	162I	161	1I	1	163I	162
50 MICHIGAN TECH UNIVERSITY	159	149	153	146	6	3	155	147
TOTAL, 1ST 50 INSTS.	15,179	14,623	12,768	12,473	2,411	2,150	13,524	13,127

SEE FOOTNOTES AT END OF TABLE.

TABLE B-41. — ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 UNIVERSITY OF KENTUCKY	158	189	142	159	16	30	147	168
52 UNIVERSITY OF COLORADO	155	156	145	142	10	14	150	147
53 UNIV OF MASS AT AMHERST	155	155	149	149	6	6	151	151
54 UNIV OF SOUTHERN CAL	151I	148	130I	128	21I	20	135I	133
55 TEXAS TECH UNIVERSITY	149	138	129	118	20	20	135	131
56 COLUMBIA UNIV MAIN DIV	147	144	113	111	34	33	126	122
57 UNIV OF NEBRASKA-LINCOLN	143	142	137	138	6	4	140	140
58 MISSISSIPPI STATE UNIV	142	144	141	137	1	7	141	139
59 SYRACUSE UNIVERSITY	141	96	87	79	54	17	97	83
60 WASHINGTON STATE UNIV	139I	139	57I	57	82I	82	109I	109I
TOTAL, 1ST 60 INSTS.	16,659	16,074	13,998	13,691	2,661	2,383	14,858	14,453
61 OREGON STATE UNIVERSITY	139	123	127	114	12	9	130	116
62 DREXEL UNIVERSITY	138	133	104	90	34	43	118	107
63 CALIFORNIA INST OF TECH	136	141	134	136	2	5	135	139
64 UNIV OF P R-MAYAGUEZ	135	112	96	81	39	31	114	91
65 UNIVERSITY OF VIRGINIA	133	138	124	131	9	7	123	131
66 WEST VIRGINIA UNIVERSITY	130	123	112	98	18	25	119	111
67 MICHIGAN STATE UNIVERSITY	130	134	124	121	6	13	127	129
68 RUTGERS THE ST UNIV OF NJ	124	109	120	106	4	3	121	107
69 UNIVERSITY OF KANSAS	124	178I	124	148I	0	30I	124I	166I
70 THE UNIVERSITY OF ALABAMA	122	116	109	103	13	13	114	104
TOTAL, 1ST 70 INSTS.	17,970	17,381	15,172	14,819	2,798	2,562	16,085	15,656
71 CASE WESTERN RESERVE UNIV	121	117	121	117	0	0	121	117
72 UTAH STATE UNIVERSITY	120	107	113	98	7	9	117	103
73 LEHIGH UNIVERSITY	117	113	108	101	9	12	112	106
74 UNIV OF WIS-MILWAUKEE	116	101	64	80	52	21	91	84
75 UNIVERSITY OF OKLAHOMA	115	97	108	97	7	0	110	97
76 UNIV OF CAL DAVIS	114	116	75	76	39	40	92	95
77 UNIV OF MISSOURI COLUMBIA	113	121	109	115	4	6	111	118
78 COLORADO SCHOOL OF MINES	111	83I	91	61I	20	22I	95I	71I
79 UNIVERSITY OF DELAWARE	110	117	106	114	4	3	107	115
80 SOUTHERN ILL U-CARBONDALE	108	102	101	96	7	6	103	98
TOTAL, 1ST 80 INSTS.	19,115	18,455	16,168	15,774	2,947	2,681	17,147	16,662
81 WORCESTER POLY INSTITUTE	107	112	94	87	13	25	96	96
82 UNIVERSITY OF TOLEDO	106	99	78	71	28	28	83	79
83 STEVENS INSTITUTE OF TECH	106I	102	76I	74	30I	28	85I	83
84 UNIV OF ILL CHICAGO CIR	106	98	93	88	13	10	97	90
85 SUNY AT BUFFALO	106	105	86	86	20	19	95	94
86 EMORY UNIVERSITY	105I	103I	91I	90I	14I	13I	92I	90I
87 UNIV OF CENTRAL FLORIDA	104	91	94	81	10	10	96	91
88 UNIV OF ARK FAYETTEVILLE	104	96	102	91	2	5	102	93
89 WAYNE STATE UNIVERSITY	102	132	64	76	38	56	78	102
90 PRINCETON UNIVERSITY	98	102	93	96	5	6	97	99
TOTAL, 1ST 90 INSTS.	20,159	19,495	17,039	16,614	3,120	2,881	18,072	17,581
91 UNIVERSITY OF LOWELL	97	85	87	78	10	7	92	80
92 BOSTON UNIVERSITY	96	77	42	32	54	45	60	47
93 RICE UNIVERSITY	95	96	75	87	20	9	83	92
94 UNIV OF TEX AT ARLINGTON	95	95	71	65	24	30	79	74
95 INDIANA UNIVERSITY	94	99	45	46	49	53	56	59I
96 UNIVERSITY OF MIAMI	93	84	69	60	24	24	74	66
97 SAN DIEGO STATE UNIV	90	105I	50	47I	40	58I	64	57I
98 US NAVAL POSTGRAD SCHOOL	89	89	89	89	0	0	89	89
99 MONTANA STATE UNIVERSITY	89	91I	79	79I	10	12I	84	86I
100 BRIGHAM YOUNG UNIVERSITY	88	94	85	86	3	8	85	88
TOTAL, 1ST 100 INSTS.	21,085	20,410	17,731	17,283	3,354	3,127	18,839	18,321
TOTAL, ALL OTHER INSTS.	5,082	5,055	4,118	4,035	964	1,020	4,450	4,396

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-42. — PHYSICAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	19,389	19,633	16,986	17,263	2,403	2,370	17,900	18,180
1 MASS INST OF TECHNOLOGY	535	501	509	474	26	27	522	487
2 UNIV OF TEXAS AT AUSTIN	416	419	378	377	38	42	402	402
3 JOHNS HOPKINS UNIVERSITY	414	391	410	388	4	3	412	389
4 UNIV OF MD COLLEGE PARK	386	372	342	337	44	35	359	361
5 UNIV OF CAL BERKELEY	365	448	186	225	179	223	262	329
6 UNIV OF ILL URBANA	282	311	260	287	22	24	269	155
7 PURDUE UNIVERSITY	281	289	253	263	28	26	264	273E
8 HARVARD UNIVERSITY	255	230	235	192	20	38	244	222
9 CORNELL UNIVERSITY	249	213	234	203	15	10	243I	207I
10 UNIV OF PENNSYLVANIA	244	109	91	93	153	16	117	98
TOTAL, 1ST 10 INSTS.	3,427	3,283	2,898	2,839	529	444	3,095	2,924
11 INDIANA UNIVERSITY	242	211	201	171	41	40	215	184
12 PENNSYLVANIA STATE UNIV	234	212	196	192	38	20	216	199
13 UNIV OF WIS-MADISON	229	228	197	202	32	26	217	218
14 CALIFORNIA INST OF TECH	224	216	221	216	3	0	223	216
15 UNIVERSITY OF MICHIGAN	220	304	206	274	14	30	212	288
16 NORTHEASTERN UNIVERSITY	219I	209	99I	97	120I	112	145I	139
17 UNIV OF CAL LOS ANGELES	205	214	148	155	57	59	180	192
18 UNIVERSITY OF ARIZONA	204	190	191	184	13	6	196	186
19 UNIVERSITY OF COLORADO	201	196	196	193	5	3	199	195
20 MICHIGAN STATE UNIVERSITY	196	199	194	196	2	3	195	197
TOTAL, 1ST 20 INSTS.	5,601	5,462	4,747	4,719	854	743	5,095	4,939
21 SUNY AT STONY BROOK	196	204	192	198	4	6	193	200
22 UNIV OF CAL SAN DIEGO	191	166	163	143	28	23	174	155
23 RUTGERS THE ST UNIV OF NJ	190	186	175	175	15	11	180	178
24 GEORGIA INSTITUTE OF TECH	183	178	176	169	7	9	180	173E
25 UNIVERSITY OF CHICAGO	177	211	164	204	13	7	169	204
26 UNIVERSITY OF ROCHESTER	172	218	169	198	3	20	170	202
27 OHIO STATE UNIVERSITY	170	163	116	116	54	47	126	126
28 STANFORD UNIVERSITY	170	173	140	146	30	27	139	152
29 UNIVERSITY OF MINNESOTA	169	176	162	166	7	10	156	170
30 UNIVERSITY OF PITTSBURGH	168E	176	158E	163	10E	13	163E	169
TOTAL, 1ST 30 INSTS.	7,387	7,313	6,362	6,397	1,025	916	6,747	6,670
31 UNIVERSITY OF WASHINGTON	166	155	134	126	32	29	152	145
32 UNIV OF CAL SANTA BARBARA	159	137	104	87	55	50	135	118
33 UNIVERSITY OF UTAH	159	163	139	142	20	21	152	159
34 CARNEGIE-MELLON UNIV	155I	152I	148I	145I	7I	7I	150I	147I
35 LOUISIANA STATE UNIV	148	134	133	130	15	4	134	130
36 NORTHWESTERN UNIVERSITY	146	180	145	174	1	6	143	177
37 PRINCETON UNIVERSITY	138	140	133	132	5	8	135	136
38 YALE UNIVERSITY	132	175	128	149	4	26	129	162
39 COLUMBIA UNIV MAIN DIV	128	141	119	130	9	11	122	134
40 UNIVERSITY OF KENTUCKY	121	119	117	111	4	8	118	115
TOTAL, 1ST 40 INSTS.	8,839	8,809	7,662	7,723	1,177	1,086	8,121	8,096
41 UNIV OF P R-RIO PIEDRAS	120	110	82	77	38	33	90	95
42 UNIVERSITY OF NOTRE DAME	117	120	112	114	5	6	115	117
43 UNIVERSITY OF VIRGINIA	117	126	115	120	2	6	114	121
44 U TENNESSEE KNOXVILLE	111	123	98	105	13	18	102	112
45 UNIV OF MASS AT AMHERST	105	105	101	101	4	4	105	105
46 WAYNE STATE UNIVERSITY	104	115	79	81	25	34	87	93
47 N C STATE UNIV AT RALEIGH	103	100	92	88	11	12	99	94
48 TEXAS A & M UNIVERSITY	103	100	103	100	0	0	103	100
49 NEW MEXICO STATE UNIV	101	88	94	84	7	4	97	86
50 UNIVERSITY OF IOWA	100	97	95	96	5	1	97	96
TOTAL, 1ST 50 INSTS.	9,920	9,893	8,633	8,689	1,287	1,204	9,131	9,116

SEE FOOTNOTES AT END OF TABLE.

TABLE B-42. — PHYSICAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 UNIVERSITY OF DELAWARE	99	97	95	97	4	0	97	97
52 UNIVERSITY OF FLORIDA	98	84	97	84	1	0	97	84
53 UNIV OF SOUTH CAROLINA	98	103	93	98	5	5	92	98
54 UNIV OF SOUTHERN CAL	98I	95	87I	85	11I	10	91I	88
55 UNIV OF HAWAII-MANOA	96	94	89	87	7	7	92	90
56 UNIVERSITY OF DAYTON	96	107	84	95	12	12	20	96
57 BOSTON UNIVERSITY	95	78	77	76	18	2	82	76
58 UNIV OF CAL IRVINE	92	95	83	77	9	18	87	89
59 EMORY UNIVERSITY	91I	89I	82I	81I	9I	8I	87I	85I
60 SUNY AT BUFFALO	91	90	84	83	7	7	90	87
TOTAL, 1ST 60 INSTS.	10,874	10,825	9,504	9,552	1,370	1,273	9,970	10,009
61 U OF HOUSTON CENTRAL CAM	88	87	65	77	23	10	71	81
62 UNIVERSITY OF NEW MEXICO	87	100	51	77	36	23	68	81
63 FLORIDA STATE UNIVERSITY	85	96	85	95	0	1	85	95
64 RICE UNIVERSITY	85	87	78	82	7	5	82	85
65 IOWA ST U OF SCI & TECH	85	72	82	69	3	3	82	69
66 UNIV OF CAL DAVIS	84	85	64	66	20	19	75	75
67 OREGON STATE UNIVERSITY	84	84	77	77	7	7	78	80
68 SAN DIEGO STATE UNIV	83	79I	62	58I	21	21I	71	58I
69 UNIV OF NC AT CHAPEL HILL	82	80	78	78	4	2	80	79
70 VA POLYTECH INST & ST U	82	77	82	77	0	0	82	77
TOTAL, 1ST 70 INSTS.	11,719	11,672	10,228	10,308	1,491	1,364	10,747	10,790
71 UNIVERSITY OF GEORGIA	81	79	77	72	4	7	79	76
72 NEW YORK UNIVERSITY	81	87	72	75	9	12	73	78
73 CUNY CITY COLLEGE	81I	81	79I	79	2I	2	79I	80
74 CASE WESTERN RESERVE UNIV	81	80	80	80	1	0	80	80
75 UNIVERSITY OF KANSAS	81	130I	81	111I	0	19I	81I	123I
76 AUBURN UNIVERSITY	79	78	71	66	8	12	74	72
77 RENSSELAER POLYTECH INST	79	82	74	77	5	5	75	79
78 UNIVERSITY OF OREGON MAIN	77	72	50	46	27	26	63	58
79 WASHINGTON UNIVERSITY	77	77	72	74	5	3	72	76
80 UNIV OF ILL CHICAGO CIR	75	81	69	72	6	9	71	75
TOTAL, 1ST 80 INSTS.	12,511	12,519	10,953	11,060	1,558	1,459	11,498	11,590
81 SUNY AT ALBANY	74	72	71	68	3	4	71	68
82 KENT STATE UNIVERSITY	73	73	69	73	4	0	71	73
83 UNIVERSITY OF CONNECTICUT	72	63	61	59	11	4	65	61
84 KANS ST U - AG & APP SCI	71	81	57	62	14	19	63	70
85 UNIV OF CAL SANTA CRUZ	71	63	56	57	15	6	66	52
86 UNIV OF NEBRASKA-LINCOLN	70	74	69	72	1	2	70	73
87 CLEMSON UNIVERSITY	70I	70	70I	70	0I	0	70I	70
88 DUKE UNIVERSITY	70	83	47	72	23	11	64	77
89 UNIVERSITY OF CINCINNATI	68	71	62	69	6	2	64	70
90 ARIZONA STATE UNIVERSITY	67	66	66	63	1	3	66	63
TOTAL, 1ST 90 INSTS.	13,217	13,235	11,581	11,725	1,636	1,510	12,170	12,269
91 UNIV OF WIS-MILWAUKEE	66	67	37	53	29	14	54	60
92 VANDERBILT UNIVERSITY	65	64	63	62	2	2	64	63
93 OREGON GRADUATE CENTER	65I	64I	65I	64I	0I	0I	65I	64I
94 SYRACUSE UNIVERSITY	64	65	64	65	0	0	62	65
95 FAIRLEIGH DICKINSON UNIV	64	73	35	39	29	34	44	51
96 OHIO UNIVERSITY	63	63	57	55	6	8	60	59
97 DREXEL UNIVERSITY	63	62	57	56	6	6	61	60
98 BROWN UNIVERSITY	63	70	60	68	3	2	61	69
99 LONG ISLAND UNIVERSITY	62I	61I	48I	48I	14I	13I	53I	52I
100 MONTANA STATE UNIVERSITY	62	66I	47	51I	15	15I	52	60I
TOTAL, 1ST 100 INSTS.	13,854	13,890	12,114	12,286	1,740	1,604	12,749	12,874
TOTAL, ALL OTHER INSTS.	5,535	5,743	4,872	4,977	663	766	5,151	5,306

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-43. — ENVIRONMENTAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	7,020	7,131	6,313	6,302	707	829	6,624	6,596
1 UNIV OF CAL SAN DIEGO	284	282	251	248	33	34	266	270
2 UNIV OF WIS-MADISON	235	231	201	202	34	29	219	221
3 COLUMBIA UNIV MAIN DIV	195	199	191	190	4	9	193	193
4 UNIV OF TEXAS AT AUSTIN	190	171	184	168	6	3	187	169
5 UNIVERSITY OF WASHINGTON	167	190	145	153	22	37	158	174
6 OREGON STATE UNIVERSITY	166	133	155	127	11	6	159	129
7 UNIV OF ILL URBANA	144	164	116	122	28	42	130	96
8 UNIVERSITY OF ARIZONA	113	113	104	103	9	10	106	107
9 LOUISIANA STATE UNIV	112	134	103	122	9	12	110	131
10 COLLEGE OF WILLIAM & MARY	109	122	109	122	0	0	109	122
TOTAL, 1ST 10 INSTS.	1,715	1,739	1,559	1,557	156	182	1,638	1,612
11 UNIV OF CAL BERKELEY	108	92	86	41	22	51	94	63
12 UNIV OF HAWAII-MANOA	108	108	101	99	7	9	104	103
13 MASS INST OF TECHNOLOGY	107	117	96	107	11	10	102	112
14 UNIVERSITY OF MIAMI	105	91	101	88	4	3	103	89
15 UNIV OF CAL LOS ANGELES	105	123	84	102	21	21	96	113
16 U OF MD CENTER FOR EES	103	132	81	100	22	32	88	111
17 PENNSYLVANIA STATE UNIV	90	87	89	84	1	3	87	85
18 TEXAS A & M UNIVERSITY	84	78	84	78	0	0	84	78
19 UNIVERSITY OF COLORADO	82	76	79	76	3	0	80	76
20 UNIVERSITY OF DELAWARE	76	77	76	75	0	2	76	76
TOTAL, 1ST 20 INSTS.	2,683	2,720	2,436	2,407	247	313	2,554	2,519
21 INDIANA UNIVERSITY	71	65	55	54	16	11	61	54
22 WOODS HOLE OCNGRPHIC INST	70	82	64	77	6	5	72	82
23 UNIV OF ALASKA FAIRBANKS	70	78I	66	76I	4	2I	68	76I
24 FLORIDA STATE UNIVERSITY	67	66	66	66	1	0	67	66
25 UNIVERSITY OF KANSAS	67	57I	67	50I	0	7I	67I	55I
26 COLORADO STATE UNIVERSITY	67	69	65	67	2	2	65	64
27 UNIV OF WIS-MILWAUKEE	65	45	38	39	27	6	46	40
28 RUTGERS THE ST UNIV OF NJ	65	57	63	52	2	5	63	53
29 UNIV OF CAL SANTA BARBARA	64	24	47	19	17	5	54	22
30 US NAVAL POSTGRAD SCHOOL	62	33	61	33	1	0	61	33
TOTAL, 1ST 30 INSTS.	3,351	3,296	3,028	2,940	323	356	3,178	3,065
31 UNIVERSITY OF UTAH	62	63	54	55	8	8	58	58
32 SUNY AT ALBANY	61	66	52	57	9	9	56	58
33 CALIFORNIA INST OF TECH	61	60	55	56	6	4	58	58
34 UNIVERSITY OF MICHIGAN	58	67	53	60	5	7	55	63
35 SUNY AT STONY BROOK	56	51	56	50	0	1	56	50
36 UNIVERSITY OF GEORGIA	55	60	53	58	2	2	54	59
37 UNIVERSITY OF KENTUCKY	52	57	52	55	0	2	52	55
38 HARVARD UNIVERSITY	51	55	50	54	1	1	50	54
39 STANFORD UNIVERSITY	49	51	36	35	13	16	35	34
40 OHIO STATE UNIVERSITY	48	55	38	42	10	13	39	44
TOTAL, 1ST 40 INSTS.	3,904	3,881	3,527	3,462	377	419	3,690	3,602
41 UNIV OF CAL SANTA CRUZ	47	33	33	24	14	9	38	25
42 UNIVERSITY OF WYOMING	46	57	43	55	3	2	44	56
43 PRINCETON UNIVERSITY	45	44	41	40	4	4	43	44
44 UNIVERSITY OF CHICAGO	45	42	45	41	0	1	45	41
45 UNIVERSITY OF OKLAHOMA	44	25	44	25	0	0	44	25
46 UNIVERSITY OF VIRGINIA	43	45	38	41	5	4	43I	45I
47 UNIV OF RHODE ISLAND	41	41	41	41	0	0	41	41
48 UNIVERSITY OF NEW MEXICO	41	47	25	31	16	16	31	39
49 N MEX INST MINING & TECH	40	40	40	40	0	0	40	40
50 UTAH STATE UNIVERSITY	39	42	35	39	4	3	39	42
TOTAL, 1ST 50 INSTS.	4,335	4,297	3,912	3,839	423	458	4,100	4,000

SEE FOOTNOTES AT END OF TABLE.

TABLE B-43. — ENVIRONMENTAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 UNIV OF SOUTH CAROLINA	39	41	36	40	3	1	39	40
52 MICHIGAN STATE UNIVERSITY	38	35	38	35	0	0	38	35
53 SAN DIEGO STATE UNIV	38	18I	37	14I	1	4I	37	14I
54 JOHNS HOPKINS UNIVERSITY	38	25	33	24	5	1	35	24
55 UNIV OF NEVADA - RENO	36I	33	24I	23	12I	10	28I	26
56 UNIVERSITY OF CONNECTICUT	35	31	31	31	4	0	31	31
57 VA POLYTECH INST & ST U	35	39	34	38	1	1	35	38
58 UNIV OF MAINE ORONO	35	37	31	36	4	1	32	36
59 N C STATE UNIV AT RALEIGH	35	32	34	30	1	2	34	31
60 UNIV OF P R-MAYAGUEZ	35	23	35	23	0	0	35	23
TOTAL, 1ST 60 INSTS.	4,699	4,611	4,245	4,133	454	478	4,447	4,298
61 CORNELL UNIVERSITY	34	34	32	31	2	3	34I	34I
62 BOSTON COLLEGE	34	34	30	30	4	4	32	32
63 UNIV OF NEW HAMPSHIRE	34	33	32	31	2	2	33	32
64 UNIV OF MASS AT AMHERST	33	33	32	32	1	1	32	32
65 UNIV OF MD COLLEGE PARK	33	25	30	24	3	1	37	25
66 NORTH DAKOTA STATE UNIV	33	33	33	33	0	0	33	33
67 UNIV OF TEXAS AT DALLAS	33	27	31	24	2	3	32	25
68 OLD DOMINION UNIVERSITY	32	32	29	26	3	6	30	29
69 DESERT RESEARCH INSTITUTE	32	32	31	30	1	2	31	31
70 GEORGIA INSTITUTE OF TECH	31	36	30	36	1	0	30	36E
TOTAL, 1ST 70 INSTS.	5,028	4,930	4,555	4,430	473	500	4,772	4,608
71 UNIV OF SOUTH FLORIDA	31I	31	31I	31	0I	0	31I	31
72 UNIV OF NEBRASKA-LINCOLN	31	30	30	29	1	1	31	29
73 UNIVERSITY OF MINNESOTA	30	70	30	65	0	5	30	50
74 PURDUE UNIVERSITY	29	31	26	28	3	3	27	28
75 NORTHERN ILLINOIS UNIV	29	29	29	26	0	3	29	27
76 FLORIDA INST OF TECH	29	36	27	29	2	7	27	35
77 UNIVERSITY OF N DAKOTA	29	18	25	14	4	4	25	15
78 UNIV OF MISSOURI COLUMBIA	27	23	25	22	2	1	26	22
79 U OF HOUSTON CENTRAL CAM	26	21	20	19	6	2	21	19
80 UNIV OF CAL RIVERSIDE	26	25	21	18	5	7	23	23
TOTAL, 1ST 80 INSTS.	5,315	5,244	4,819	4,711	496	533	5,044	4,889
81 UNIVERSITY OF IDAHO	25	25	22	20	3	5	23	22
82 YALE UNIVERSITY	24	27	22	24	2	3	22	26
83 WRIGHT STATE UNIVERSITY	24	24	17	19	7	5	17	19
84 BROWN UNIVERSITY	24	23	24	21	0	2	24	22
85 LONG ISLAND UNIVERSITY	23I	22I	16I	16I	7I	6I	20I	19I
86 UNIVERSITY OF AKRON	23	23	19	17	4	6	20	19
87 UNIVERSITY OF FLORIDA	22	21	21	19	1	2	21	19
88 NORTHEASTERN UNIVERSITY	22I	21	11I	11	11I	10	15I	15
89 BRIGHAM YOUNG UNIVERSITY	22	23	21	23	1	0	21	23
90 UNIVERSITY OF MONTANA	21	19	20	19	1	0	20	19
TOTAL, 1ST 90 INSTS.	5,545	5,472	5,012	4,900	533	572	5,252	5,095
91 UNIVERSITY OF PITTSBURGH	21E	19	16E	16	5E	3	18E	17
92 UNIV OF ILL CHICAGO CIR	21	20	20	20	1	0	20	20
93 UNIV OF NC AT CHAPEL HILL	21	21	21	20	0	1	21	20
94 SOUTHERN ILL U-CARBONDALE	20	19	20	17	0	2	20	18
95 ARIZONA STATE UNIVERSITY	20	44	20	35	0	9	19	37
96 KENT STATE UNIVERSITY	20	20	20	20	0	0	20	20
97 OHIO UNIVERSITY	20	20	18	16	2	4	19	18
98 MONTANA STATE UNIVERSITY	19	12I	18	12I	1	0I	18	12I
99 UNIVERSITY OF TOLEDO	19	21	15	15	4	6	16	17
100 SUNY AT BINGHAMTON	19	26	18	22	1	4	18	23
TOTAL, 1ST 100 INSTS.	5,745	5,694	5,198	5,093	547	601	5,443	5,299
TOTAL, ALL OTHER INSTS.	1,275	1,437	1,115	1,209	160	228	1,181	1,297

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-44. — MATHEMATICAL/COMPUTER SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	18,412	17,472	14,586	13,935	3,826	3,537	16,011	15,218
1 PURDUE UNIVERSITY	321	313	223	217	98	96	267	242E
2 INDIANA UNIVERSITY	302	164	172	128	130	36	210	140
3 NORTHEASTERN UNIVERSITY	281I	265	60I	59	221I	206	144I	136
4 PENNSYLVANIA STATE UNIV	275	250	188	179	87	71	224	209
5 UNIV OF ILL URBANA	247	196	232	183	15	13	238	92
6 OHIO STATE UNIVERSITY	235	213	148	136	87	77	169	159
7 UNIV OF WIS-MADISON	233	217	199	190	34	27	217	205
8 UNIV OF TEXAS AT AUSTIN	225	225	212	201	13	24	217	212
9 RUTGERS THE ST UNIV OF NJ	222	241	212	232	10	9	215	235
10 JOHNS HOPKINS UNIVERSITY	213	203	213	200	0	3	213	201
TOTAL, 1ST 10 INSTS.	2,554	2,287	1,859	1,725	695	562	2,115	1,832
11 UNIVERSITY OF PITTSBURGH	196E	169	122E	118	74E	51	159E	143
12 UNIV OF SOUTH CAROLINA	195	190	170	156	25	34	175	167
13 NEW YORK UNIVERSITY	191	136	155	116	36	20	160	125
14 MASS INST OF TECHNOLOGY	188	152	165	142	23	10	177	147
15 UNIVERSITY OF MINNESOTA	188	170	163	147	25	23	177	161
16 UNIV OF MD COLLEGE PARK	187	167	153	139	34	28	172	156
17 N C STATE UNIV AT RALEIGH	176	171	152	140	24	31	158	148
18 LOUISIANA STATE UNIV	173	177	156	148	17	29	163	157
19 SYRACUSE UNIVERSITY	171	97	132	92	39	5	165	92
20 NEW MEXICO STATE UNIV	168	169	160	154	8	15	163	162
TOTAL, 1ST 20 INSTS.	4,387	3,885	3,287	3,077	1,000	808	3,785	3,292
21 PACE UNIVERSITY	160	160	35	35	125	125	114	114
22 IOWA ST U OF SCI & TECH	160	151	150	140	10	11	156	146
23 BOSTON UNIVERSITY	145	195	49	44	96	151	82	95
24 GEORGIA INSTITUTE OF TECH	141	117	118	100	23	17	123	108E
25 BRIGHAM YOUNG UNIVERSITY	140	135	134	128	6	7	136	131
26 TEXAS A & M UNIVERSITY	137	135	137	135	0	0	137	135
27 UNIVERSITY OF KENTUCKY	137	190	108	157	29	33	121	167
28 UNIV OF PENNSYLVANIA	136	99	83	85	53	14	89	86
29 STANFORD UNIVERSITY	136	123	92	89	44	34	83	86
30 MICHIGAN STATE UNIVERSITY	135	147	129	141	6	6	132	145
TOTAL, 1ST 30 INSTS.	5,814	5,337	4,422	4,131	1,392	1,206	4,959	4,506
31 GEORGE WASHINGTON UNIV	132	128	61	56	71	72	84	87
32 FLORIDA STATE UNIVERSITY	127	121	121	114	6	7	124	116
33 U TENNESSEE KNOXVILLE	122	130	118	118	4	12	119	124
34 UNIVERSITY OF ARIZONA	120	105	116	103	4	2	117	103
35 AUBURN UNIVERSITY	117	110	101	93	16	17	106	98
36 WAYNE STATE UNIVERSITY	116	122	82	62	34	60	93	82
37 VA POLYTECH INST & ST U	114	119	112	118	2	1	113	118
38 MIAMI UNIVERSITY (OHIO)	112	71	84	69	28	2	94	70
39 NORTHWESTERN UNIVERSITY	112	109	105	103	7	6	110	106
40 GEORGIA STATE UNIVERSITY	112	98	92	87	20	11	104	93
TOTAL, 1ST 40 INSTS.	6,998	6,450	5,414	5,054	1,584	1,396	6,026	5,505
41 TEMPLE UNIVERSITY	112	123	92	95	20	28	107I	119I
42 WASHINGTON STATE UNIV	111I	110	80I	80	31I	30	80I	80I
43 UNIV OF CAL BERKELEY	110	105	84	81	26	24	93	91
44 ARIZONA STATE UNIVERSITY	109	110	109	108	0	2	108	109
45 NEW YORK INST TECHNOLOGY	107I	103	44I	44	63I	59	66I	64
46 UNIVERSITY OF MICHIGAN	104	120	102	112	2	8	103	115
47 UNIVERSITY OF NEW MEXICO	101	112	73	81	28	31	92	99
48 SAN DIEGO STATE UNIV	99	78I	75	45I	24	33I	77	56I
49 UNIV OF P R-RIO PIEDRAS	98	89	77	75	21	14	83	82
50 UNIVERSITY OF IOWA	98	80	94	74	4	6	95	76
TOTAL, 1ST 50 INSTS.	8,047	7,480	6,244	5,849	1,803	1,631	6,934	6,399

SEE FOOTNOTES AT END OF TABLE.

TABLE B-44. — MATHEMATICAL/COMPUTER SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 CARNEGIE-MELLON UNIV	97I	94I	88I	86I	9I	8I	92I	89I
52 UNIV OF ILL CHICAGO CIR	97	105	88	89	9	16	91	95
53 UNIVERSITY OF GEORGIA	96	91	87	81	9	10	90	85
54 OREGON STATE UNIVERSITY	96	101	73	77	23	24	80	86
55 UNIVERSITY OF UTAH	96	97	83	84	13	13	86	87
56 UNIVERSITY OF WASHINGTON	95	91	77	79	18	12	84	84
57 UNIVERSITY OF CHICAGO	93	96	59	62	34	34	51	62
58 AMERICAN UNIVERSITY	92	82	36	34	56	48	62	50
59 WRIGHT STATE UNIVERSITY	91	82	57	47	34	35	66	56
60 WASHINGTON UNIVERSITY	91	62	86	61	5	1	88E	62
TOTAL, 1ST 60 INSTS.	8,991	8,381	6,978	6,549	2,013	1,832	7,729	7,158
61 COLORADO STATE UNIVERSITY	91	90	85	85	6	5	85	85
62 SUNY AT BINGHAMTON	91	55	76	41	15	14	79	44
63 SUNY AT STONY BROOK	90	91	83	80	7	11	86	83
64 UNIVERSITY OF COLORADO	89	86	86	85	3	1	87	86
65 UNIVERSITY OF VIRGINIA	89	81	86	78	3	3	86	80
66 UNIV OF CAL SAN DIEGO	89	73	74	60	15	13	84	65
67 SOUTHERN ILL U-CARBONDALE	88	77	83	75	5	2	85	76
68 SUNY AT BUFFALO	87	86	87	86	0	0	87	86
69 FLORIDA INST OF TECH	86	63	25	25	61	38	48	47
70 CORNELL UNIVERSITY	85	69	75	66	10	3	83I	67I
TOTAL, 1ST 70 INSTS.	9,876	9,152	7,738	7,230	2,138	1,922	8,542	7,879
71 UNIVERSITY OF LOUISVILLE	83	85	73	50	10	35	77	60
72 THE UNIVERSITY OF ALABAMA	83	82	76	72	7	10	81	76
73 UNIV OF TEX AT ARLINGTON	83	80	58	59	25	21	64	64
74 N J INST OF TECHNOLOGY	83	69	42	40	41	29	62	48
75 CLEMSON UNIVERSITY	83I	83	76I	76	7I	7	78I	79
76 UNIVERSITY OF CINCINNATI	82	87	68	68	14	19	73	73
77 KENT STATE UNIVERSITY	81	76	54	48	27	28	65	59
78 UNIV OF SOUTHWESTERN LA	80	71	74	69	6	2	75	71
79 CUNY CITY COLLEGE	79I	79	66I	66	13I	13	72I	72
80 UNIVERSITY OF FLORIDA	79	78	75	73	4	5	77	75
TOTAL, 1ST 80 INSTS.	10,692	9,942	8,400	7,851	2,292	2,091	9,269	8,559
81 DE PAUL UNIVERSITY	79	80	30	30	49	50	50	49
82 KANS ST U - AG & APP SCI	78	81	63	66	15	15	70	73
83 HOFSTRA UNIVERSITY	77	78	48	51	29	27	59	61
84 FAIRLEIGH DICKINSON UNIV	76	81	28	29	48	52	46	48
85 NORTHERN ILLINOIS UNIV	75	71	70	65	5	6	72	69
86 UNIV OF MASS AT AMHERST	75	75	71	71	4	4	72	72
87 ILLINOIS STATE UNIVERSITY	74	94	60	79	14	15	66	86
88 U OF HOUSTON CENTRAL CAM	74	79	62	66	12	13	66	69
89 UNIVERSITY OF NEW ORLEANS	73	56	58	45	15	11	63	50
90 MONTANA STATE UNIVERSITY	72	56I	52	44I	20	12I	61	51I
TOTAL, 1ST 90 INSTS.	11,445	10,693	8,942	8,397	2,503	2,296	9,898	9,192
91 UNIV OF CAL LOS ANGELES	71	81	66	75	5	6	68	77
92 LONG ISLAND UNIVERSITY	71I	68I	45I	44I	26I	24I	56I	53I
93 MICHIGAN TECH UNIVERSITY	70	68	65	64	5	4	67	66
94 UNIVERSITY OF CONNECTICUT	70	86	52	72	18	14	55	78
95 UNIVERSITY OF TOLEDO	70	60	51	41	19	19	61	50
96 VILLANOVA UNIVERSITY	69	52	37	32	32	20	46	39
97 RENSSELAER POLYTECH INST	69	62	65	56	4	6	66	57
98 UNIVERSITY OF LOWELL	68	54	54	46	14	8	61	50
99 WEST VIRGINIA UNIVERSITY	67	63	50	52	17	11	57	56
100 UNIV OF HAWAII-MANOA	67	70	52	53	15	17	58	60
TOTAL, 1ST 100 INSTS.	12,137	11,357	9,479	8,932	2,658	2,425	10,496	9,781
TOTAL, ALL OTHER INSTS.	6,275	6,115	5,107	5,003	1,168	1,112	5,514	5,437

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-45. — LIFE SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	126,985	123,165	100,756	98,449	26,229	24,716	109,808	107,803
1 HARVARD UNIVERSITY	6,067	5,662	3,895	3,671	2,172	1,991	5,295	5,313
2 OHIO STATE UNIVERSITY	3,412	2,753	966	1,042	2,446	1,711	1,467	1,225
3 LOUISIANA STATE UNIV	2,354	2,267	1,897	1,831	457	436	1,981	1,927
4 UNIV OF CAL SAN FRANCISCO	2,169	2,113	1,449	1,332	720	781	1,799	1,741
5 UNIV OF WIS-MADISON	2,105	2,079	1,737	1,726	368	353	1,962	1,943
6 UNIVERSITY OF MINNESOTA	2,041	2,145	1,717	1,794	324	351	1,625	1,785
7 UNIV OF CAL LOS ANGELES	2,015	1,780	1,448	1,234	567	546	1,721	1,507
8 UNIVERSITY OF FLORIDA	1,788	1,593	1,658	1,457	130	136	1,702	1,500
9 HOWARD UNIVERSITY	1,680	1,038I	790	645I	890	393I	1,018	696I
10 JOHNS HOPKINS UNIVERSITY	1,606	1,666	1,520	1,607	86	59	1,543	1,637
TOTAL, 1ST 10 INSTS.	25,237	23,096	17,077	16,339	8,160	6,757	20,115	19,274
11 UNIV OF CAL DAVIS	1,597	1,569	1,231	1,205	366	364	1,430	1,407
12 CORNELL UNIVERSITY	1,480	1,361	1,388	1,304	92	57	1,429I	1,320I
13 YALE UNIVERSITY	1,458	1,677	1,329	1,405	129	272	1,396	1,542
14 UNIVERSITY OF IOWA	1,458	1,402	1,182	1,140	276	262	1,313	1,337
15 CUNY MT SINAI SCH OF MED	1,396I	1,357I	1,110I	1,091I	286I	266I	1,194I	1,161I
16 UNIVERSITY OF WASHINGTON	1,388	1,453	993	1,064	395	389	1,188I	1,256
17 UNIVERSITY OF MICHIGAN	1,382	1,599	1,042	1,233	340	366	1,175	1,382
18 COLUMBIA UNIV MAIN DIV	1,352	1,326	1,059	1,035	293	291	1,157	1,132
19 NEW YORK UNIVERSITY	1,343	1,393	903	948	440	445	1,052	1,097
20 WASHINGTON UNIVERSITY	1,343	1,324	1,251	1,238	92	86	1,285	1,272
TOTAL, 1ST 20 INSTS.	39,434	37,557	28,565	28,002	10,869	9,555	32,739	32,153
21 UNIV OF PENNSYLVANIA	1,331	1,265	1,032	1,017	299	248	1,135	1,118
22 CASE WESTERN RESERVE UNIV	1,325	1,240	1,070	1,016	255	224	1,157	1,098
23 UNIVERSITY OF PITTSBURGH	1,293E	1,264	1,113E	1,079	180E	185	1,203F	1,171
24 UNIVERSITY OF UTAH	1,274	1,294	1,169	1,186	105	108	1,198	1,217
25 INDIANA UNIVERSITY	1,257	1,304E	936	921E	321	383E	1,036	1,034E
26 DUKE UNIVERSITY	1,203	1,271	1,203	1,231	0	40	1,203	1,247
27 UNIV OF MD BALT PROF SCH	1,181	943	748	576	433	367	938	686
28 U TEX HLTH SCI CTR DALLAS	1,175	995	889	734	286	261	981	817
29 UNIV OF SOUTHERN CAL	1,162I	1,128	892I	877	270I	251	970I	942
30 U TEX HLTH SCI CTR S ANTO	1,092	984	858	842	234	142	951	886
TOTAL, 1ST 30 INSTS.	51,727	49,245	38,475	37,481	13,252	11,764	43,513	42,371
31 TEXAS A & M UNIVERSITY	1,075	1,078	1,075	1,078	0	0	1,075	1,078
32 UNIVERSITY OF KENTUCKY	1,062	1,274	955	1,138	107	136	986	1,186
33 UNIV ALABAMA BIRMINGHAM	1,058	985	938	897	120	88	967	922
34 U TEX HLTH SCI CTR HOUSTN	1,058	1,039	899	829	159	210	964	917
35 N C STATE UNIV AT RALEIGH	950	895	939	878	11	17	943	882
36 COL OF MED & DENT OF N J	931I	927	713I	711	218I	216	799I	796
37 UNIV OF CAL SAN DIEGO	922	879	722	680	200	199	832	794
38 BAYLOR COL OF MEDICINE	918	892	792	769	126	123	769	794E
39 UNIV OF MISSOURI COLUMBIA	899	927	796	838	103	89	827	868
40 MICHIGAN STATE UNIVERSITY	896	888	818	814	78	74	846	848
TOTAL, 1ST 40 INSTS.	61,496	59,029	47,122	46,113	14,374	12,916	52,524	51,459
41 UNIV OF ILL MED CTR CHGO	884	963	619	689	265	274	727	805
42 UNIVERSITY OF MIAMI	883E	783E	832E	733E	51E	50E	855E	758
43 YESHIVA UNIVERSITY	878	878	690	690	188	188	773	773
44 NEW YORK MEDICAL COLLEGE	864	854	630	619	234	235	739	673
45 UNIV OF ILL URBANA	858	840	729	728	129	112	786	443
46 UNIVERSITY OF CINCINNATI	845	832	740	719	105	113	771	753
47 UNIVERSITY OF CONNECTICUT	833	860	697	704	136	156	747	777
48 UNIV OF NC AT CHAPEL HILL	833	847	816	829	17	18	824	838
49 UNIVERSITY OF ROCHESTER	826	684	799	660	27	24	810	667
50 UNIV OF CAL BERKELEY	820	835	557	571	263	264	672	689
TOTAL, 1ST 50 INSTS.	70,020	67,405	54,231	53,055	15,789	14,350	60,232	58,637

SEE FOOTNOTES AT END OF TABLE.

TABLE B-48. — LIFE SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 MED UNIV OF SO CAROLINA	817	881	719	720	98	161	548	679
52 SUNY DOWNSTATE MED CTR	811I	808I	670I	668I	141I	140I	727I	724I
53 U OF ARKANSAS MED SCI CAM	808	805	729	731	79	74	756	755
54 NORTHWESTERN UNIVERSITY	807	616	624	472	183	144	695	543
55 UNIVERSITY OF CHICAGO	804	827	771	794	33	33	771	806
56 WAYNE STATE UNIVERSITY	792	950	654	741	138	209	709	827
57 UNIVERSITY OF COLORADO	790	783	684	675	106	108	728	720
58 TEMPLE UNIVERSITY	784	735	666	674	118	61	784I	734I
59 PURDUE UNIVERSITY	781	797	701	711	80	86	727	732E
60 PENNSYLVANIA STATE UNIV	773	762	713	710	60	52	750	747
TOTAL, 1ST 60 INSTS.	77,987	75,369	61,162	59,951	16,825	15,418	67,429	65,905
61 U TEXAS SYSTEM CANCER CTR	772	799	717	757	55	42	746	778
62 THE OREG HLTH SCI UNIV	772I	769I	508I	507I	264I	262I	604I	602I
63 UNIVERSITY OF OKLAHOMA	770	750	622	590	148	160	706	594
64 UNIVERSITY OF ARIZONA	749	682	637	586	112	96	684	628
65 GEORGETOWN UNIVERSITY	742	724	711	696	31	28	727	711
66 VIRGINIA COMMONWLTH UNIV	735	689	659	626	76	63	691	654
67 SUNY AT BUFFALO	726	708	444	440	282	268	529	515
68 BOSTON UNIVERSITY	719	701	555	556	164	145	606	597
69 VANDERBILT UNIVERSITY	714	701	574	581	140	120	589	597
70 UNIV OF HAWAII-MANOA	709	701	514	524	195	177	584	584
TOTAL, 1ST 70 INSTS.	85,395	82,593	67,103	65,814	18,292	16,779	73,896	72,167
71 PHILA COL OSTEOPATHIC MED	705	566	108	103	597	463	167	164
72 KANS ST U - AG & APP SCI	704	698	606	612	98	86	658	657
73 UNIV OF CAL IRVINE	685	659	526	500	159	159	600	673
74 UNIVERSITY OF GEORGIA	684	666	662	650	22	16	672	656
75 UNIV TENN CTR HEALTH SCI	674	704	515	537	159	167	555	580
76 UNIVERSITY OF KANSAS	662	782I	614	626I	48	156I	624I	710I
77 U OF CAL SYS WIDE PRGMS	647	114	613	109	34	5	627	111
78 IOWA ST U OF SCI & TECH	644	623	576	563	68	60	621	603
79 SUNY AT STONY BROOK	616	565	538	500	78	65	568	522
80 TUFTS UNIVERSITY	613I	581	197I	194	416I	387	328I	312
TOTAL, 1ST 80 INSTS.	92,029	88,551	72,058	70,208	19,971	18,343	79,319	77,158
81 GEORGE WASHINGTON UNIV	612	513	356	316	256	197	465	402
82 OREGON STATE UNIVERSITY	583	614	512	558	71	56	542	595
83 UNIVERSITY OF VIRGINIA	581	579	559	548	22	31	546	552
84 UNIVERSITY OF MISSISSIPPI	552	558	431	444	121	114	0	451I
85 EMORY UNIVERSITY	546I	532I	455I	447I	91I	85I	475I	463I
86 UNIVERSITY OF NEW MEXICO	540	617	407	458	133	159	465	526
87 UNIVERSITY OF LOUISVILLE	521	461	380	356	141	105	412	387
88 UNIV OF P R-MED SCI CMPUS	493	476	405	393	88	83	405	444
89 COLORADO STATE UNIVERSITY	489	510	470	487	19	23	470	496
90 AUBURN UNIVERSITY	482	450	462	427	20	23	474	439
TOTAL, 1ST 90 INSTS.	97,428	93,861	76,495	74,642	20,933	19,219	83,576	81,916
91 LOYOLA UNIV - CHICAGO	481	470	285	274	196	196	351	339
92 UNIV OF CAL RIVERSIDE	478	495	427	432	51	63	458	485
93 MEDICAL COL OF GEORGIA	473	602	370	455	103	147	413	528
94 CLEMSON UNIVERSITY	465I	464	462I	461	3I	3	462I	462
95 MASS INST OF TECHNOLOGY	465	385	409	340	56	45	437	362
96 STANFORD UNIVERSITY	461	471	422	422	39	49	388	396
97 ST LOUIS UNIVERSITY	457	438	371	357	86	81	400	383
98 U TEX MED BRNCH GALVESTON	429	425	429	425	0	0	429	425
99 VA POLYTECH INST & ST U	421	418	419	416	2	2	421	417
100 RUTGERS THE ST UNIV OF NJ	420	425	408	421	12	4	412	422
TOTAL, 1ST 100 INSTS.	101,978	98,454	80,497	78,645	21,481	19,809	87,748	86,136
TOTAL, ALL OTHER INSTS.	25,007	24,711	20,259	19,804	4,748	4,907	22,059	21,666

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-46. — PSYCHOLOGISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	10,416	10,410	8,230	8,207	2,186	2,203	8,960	8,986
1 UNIV OF WIS-MADISON	197	200	166	163	31	37	183	184
2 INDIANA UNIVERSITY	175	124	121	99	54	25	134	108
3 UNIVERSITY OF KANSAS	168	75I	168	61I	0	14I	168I	66I
4 UNIV OF ILL URBANA	158	175	133	150	25	25	138	88
5 NEW YORK UNIVERSITY	147	161	70	72	77	89	86	105
6 UNIV OF TEXAS AT AUSTIN	138	143	109	109	29	34	125	124
7 UNIVERSITY OF MICHIGAN	136	205	105	158	31	47	119	183
8 UNIVERSITY OF CONNECTICUT	136	135	118	115	18	20	118	124
9 RUTGERS THE ST UNIV OF NJ	132	127	128	126	4	1	129	126
10 CORNELL UNIVEPSITY	121	119	110	108	11	11	113I	111I
TOTAL, 1ST 10 INSTS.	1,508	1,464	1,228	1,161	280	303	1,315	1,220
11 UNIVERSITY OF MINNESOTA	119	123	109	112	10	11	118	119
12 MICHIGAN STATE UNIVERSITY	113	113	109	113	4	0	111	113
13 PURDUE UNIVERSITY	111	105	91	87	20	18	98	96E
14 TEMPLE UNIVERSITY	105	115	97	97	8	18	97I	97I
15 SOUTHERN ILL U-CARBONDALE	104	119	92	110	12	9	97	115
16 UNIV OF P R-RIO PIEDRAS	100	89	100	89	0	0	100	89
17 UNIVERSITY OF COLORADO	100	102	92	81	8	21	96	89
18 UNIV OF CAL LOS ANGELES	96	110	71	76	25	34	83	93
19 NORTHEASTERN UNIVERSITY	93I	89	33I	33	60I	56	56I	54
20 UNIVERSITY OF ARIZONA	92	86	83	79	9	7	86	82
TOTAL, 1ST 20 INSTS.	2,541	2,515	2,105	2,038	436	477	2,259	2,168
21 UNIV OF CAL BERKELEY	91	76	59	52	32	24	71	66
22 YESHIVA UNIVERSITY	88	88	49	49	39	39	69	69
23 PENNSYLVANIA STATE UNIV	82	80	74	76	8	4	78	78
24 NEW MEXICO STATE UNIV	82	131	74	125	8	6	77	126
25 VANDERBILT UNIVERSITY	80	76	74	70	6	6	76	72
26 MASS INST OF TECHNOLOGY	78	26	55	20	23	6	67	23
27 SYRACUSE UNIVERSITY	76	42	58	34	18	8	67	36
28 SUNY AT ALBANY	75	78	63	69	12	9	66	69
29 U TENNESSEE KNOXVILLE	74	78	56	57	18	21	62	63
30 UNIV OF SOUTH CAROLINA	74	80	68	71	6	9	69	73
TOTAL, 1ST 30 INSTS.	3,341	3,270	2,735	2,661	606	609	2,963	2,844
31 UNIVERSITY OF KENTUCKY	73	102	53	65	20	37	58	76
32 OHIO STATE UNIVERSITY	73	76	46	48	27	28	47	50
33 UNIVERSITY OF GEORGIA	73	71	69	67	4	4	70	69
34 UNIVERSITY OF PITTSBURGH	72E	68	63E	65	9E	3	67E	66
35 GEORGE WASHINGTON UNIV	70	58	25	30	45	28	40	40
36 ST JOHN'S UNIVERSITY (NY)	69I	66	38I	37	31I	29	49I	47
37 SAN DIEGO STATE UNIV	68	73I	53	52I	15	21I	54	52I
38 UNIV OF VT & ST AGRIC COL	68	29	66	27	2	2	66	28
39 WAYNE STATE UNIVERSITY	66	95	36	36	30	59	43	56
40 CAL SCH PROF PSYCH-L A	64	63	9	8	55	55	29	29
TOTAL, 1ST 40 INSTS.	4,037	3,971	3,193	3,096	844	875	3,490	3,358
41 UNIV OF PENNSYLVANIA	63	34	27	25	36	9	34	28
42 LOYOLA UNIV - CHICAGO	61	61	36	36	25	25	44	44
43 FAIRLEIGH DICKINSON UNIV	61	70	36	42	25	28	44	50
44 ROCKEFELLER UNIVERSITY	60	39	57	35	3	4	59	37
45 UNIVERSITY OF WASHINGTON	59	64	46	50	13	14	51	54
46 BOSTON UNIVERSITY	59	40	36	39	23	1	44	39
47 NORTHWESTERN UNIVERSITY	59	39	50	32	9	7	48	35
48 UNIV OF MASS AT AMHERST	59	59	51	51	8	8	55	55
49 SUNY AT BUFFALO	59	59	56	56	3	3	59	59
50 ADELPHI UNIVERSITY	58	68	23	25	35	43	33	37
TOTAL, 1ST 50 INSTS.	4,635	4,504	3,611	3,487	1,024	1,017	3,963	3,798

SEE FOOTNOTES AT END OF TABLE.

TABLE B-46. — PSYCHOLOGISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 PACE UNIVERSITY	56	56	16	16	40	40	43	43
52 DUKE UNIVERSITY	55	36	24	23	31	13	33	28
53 SUNY AT STONY BROOK	55	55	51	50	4	5	53	52
54 YALE UNIVERSITY	53	67	38	44	15	23	44	56
55 BRIGHAM YOUNG UNIVERSITY	53	49	41	39	12	10	45	41
56 COLUMBIA U TEACHERS COL	53I	52	28I	28	25I	24	35I	34
57 MIAMI UNIVERSITY (OHIO)	53	51	51	50	2	1	51	50
58 AUBURN UNIVERSITY	53	50	36	28	17	22	43	41
59 FLORIDA STATE UNIVERSITY	52	44	47	43	5	1	52	43
60 UNIV OF NEBRASKA-LINCOLN	52	50	49	48	3	2	50	49
TOTAL, 1ST 60 INSTS.	5,170	5,014	3,992	3,856	1,178	1,158	4,414	4,239
61 HOFSTRA UNIVERSITY	52	58	32	30	20	28	40	41
62 UNIV OF SOUTHERN CAL	51I	49	39I	38	12I	11	42I	40
63 UNIVERSITY OF FLORIDA	51	49	47	44	4	5	48	46
64 HARVARD UNIVERSITY	51	61	43	44	8	17	47	52
65 UNIV ALABAMA BIRMINGHAM	50	29	43	27	7	2	44	28
66 U OF HOUSTON CENTRAL CAM	49	60	35	46	14	14	38	50
67 UNIV OF WIS-MILWAUKEE	49	58	27	47	22	11	37	52
68 UNIVERSITY OF UTAH	49	50	40	41	9	9	41	42
69 LONG ISLAND UNIVERSITY	48I	46I	35I	34I	13I	12I	40I	38I
70 TEXAS A & M UNIVERSITY	48	46	48	46	0	0	48	46
TOTAL, 1ST 70 INSTS.	5,668	5,520	4,381	4,253	1,287	1,267	4,842	4,676
71 EMORY UNIVERSITY	47I	45I	36I	35I	11I	10I	38I	37I
72 UNIV OF MD COLLEGE PARK	45	45	44	44	1	1	43	44
73 WRIGHT STATE UNIVERSITY	45	46	33	34	12	12	28	31
74 UNIV OF MISSOURI COLUMBIA	45	46	42	39	3	7	42	42
75 COLORADO STATE UNIVERSITY	45	47	45	45	0	2	45	42
76 UNIVERSITY OF ROCHESTER	44	86	43	82	1	4	43	83
77 UNIVERSITY OF DENVER	44	40	35	31	9	9	37	35
78 BALL STATE UNIVERSITY	43	43	43	43	0	0	43	43
79 ILLINOIS STATE UNIVERSITY	43	59	30	50	13	9	35	53
80 UNIV OF CAL SANTA BARBARA	42	28	32	23	10	5	37	25
TOTAL, 1ST 80 INSTS.	6,111	6,005	4,764	4,679	1,347	1,326	5,237	5,113
81 NEW SCH FOR SOC RESEARCH	42I	40I	15I	15I	27I	25I	42I	40I
82 UNIVERSITY OF IOWA	42	38	33	35	9	3	35	37
83 UNIV OF NC AT CHAPEL HILL	42	43	41	42	1	1	41	42
84 THE UNIVERSITY OF ALABAMA	41	38	36	34	5	4	37	35
85 COL OF MED & DENT OF N J	41I	41	27I	27	14I	14	34I	35
86 LOUISIANA STATE UNIV	41	42	37	37	4	5	39	38
87 GEORGE MASON UNIVERSITY	41	42I	28	27I	13	15I	31	33I
88 UNIVERSITY OF CHICAGO	41	45	40	44	1	1	23	44
89 CENTRAL MICHIGAN UNIV	40	42	33	36	7	6	36	38
90 CUNY HUNTER COLLEGE	40	32	27	25	13	7	31	28
TOTAL, 1ST 90 INSTS.	6,522	6,408	5,081	5,001	1,441	1,407	5,590	5,486
91 WICHITA STATE UNIVERSITY	40	48	33	43	7	5	35	46
92 EAST CAROLINA UNIVERSITY	39	39	32	32	7	7	39	39
93 OHIO UNIVERSITY	39	37	26	23	13	14	31	29
94 KENT STATE UNIVERSITY	38	38	33	34	5	4	36	36
95 UNIVERSITY OF CINCINNATI	38	52	28	41	10	11	30	43
96 UNIV OF HAWAII-MANOA	37	41	31	35	6	6	33	37
97 NOVA UNIVERSITY	37I	35	15I	15	22I	20	19I	18
98 UNIV OF CAL SAN DIEGO	37	37	22	28	15	9	30	34
99 JOHNS HOPKINS UNIVERSITY	37	30	33	30	4	0	35	30
100 STANFORD UNIVERSITY	36	41	25	28	11	13	25	29
TOTAL, 1ST 100 INSTS.	6,900	6,806	5,359	5,310	1,541	1,496	5,907	5,830
TOTAL, ALL OTHER INSTS.	3,516	3,604	2,871	2,897	645	707	3,053	3,156

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-47. — SOCIAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	28,171	28,767	23,011	23,268	5,160	5,499	24,766	25,143
1 UNIVERSITY OF MINNESOTA	538	596	488	522	50	74	474	513
2 OHIO STATE UNIVERSITY	523	637	242	254	281	383	266	303
3 WEST VIRGINIA UNIVERSITY	496	488	463	450	33	38	476	467
4 TEXAS A & M UNIVERSITY	441	424	441	424	0	0	441	424
5 UNIV OF WIS-MADISON	427	410	308	324	119	86	366	367
6 RUTGERS THE ST UNIV OF NJ	420	457	416	452	4	5	418	453
7 INDIANA UNIVERSITY	373	316	285	223	88	93	310	267
8 UNIV OF PENNSYLVANIA	356	265	244	237	112	28	259	244
9 COLUMBIA UNIV MAIN DIV	334	347	225	245	109	102	262	279
10 UNIV OF TEXAS AT AUSTIN	334	336	288	278	46	58	310	305
TOTAL, 1ST 10 INSTS.	4,242	4,276	3,400	3,409	842	867	3,583	3,623
11 UNIV OF ILL URBANA	315	454	293	389	22	65	290	229
12 UNIVERSITY OF MICHIGAN	319	346	279	285	36	61	298	315
13 CORNELL UNIVERSITY	304	291	272	258	32	33	289I	277I
14 NEW YORK UNIVERSITY	300	275	179	156	121	119	198	187
15 MICHIGAN STATE UNIVERSITY	286	295	282	281	4	14	285	281
16 UNIV OF CAL BERKELEY	278	332	199	229	79	103	236	279
17 UNIV OF CAL LOS ANGELES	265	339	198	264	67	75	228	300
18 UNIVERSITY OF FLORIDA	255	240	240	227	15	13	248	234
19 UNIVERSITY OF CONNECTICUT	253	265	210	217	43	48	221	231
20 PURDUE UNIVERSITY	251	265	200	211	51	54	221	236E
TOTAL, 1ST 20 INSTS.	7,064	7,378	5,752	5,926	1,312	1,452	6,100	6,195
21 MASS INST OF TECHNOLOGY	250	224	210	185	40	39	230	204
22 NORTHEASTERN UNIVERSITY	245I	234	102I	100	143I	134	157I	150
23 BOSTON UNIVERSITY	245	213	121	134	124	79	162	161
24 UNIV OF P R-RIO PIEDRAS	245	279	237	273	8	6	239	277
25 UNIV OF SOUTH CAROLINA	242	256	207	224	35	32	211	237
26 JOHNS HOPKINS UNIVERSITY	240	206	157	123	83	83	188	161
27 UNIVERSITY OF KENTUCKY	235	235	219	207	16	28	224	215
28 UNIVERSITY OF WASHINGTON	229	258	170	194	59	64	197	227
29 UNIV OF HAWAII-MANOA	229	241	176	187	53	54	200	207
30 PENNSYLVANIA STATE UNIV	228	233	203	206	25	27	215	217
TOTAL, 1ST 30 INSTS.	9,452	9,757	7,554	7,759	1,898	1,998	8,126	8,253
31 NEW MEXICO STATE UNIV	227	181	204	163	23	18	214	171
32 N C STATE UNIV AT RALEIGH	224	221	173	174	51	47	193	191
33 UNIV OF MD COLLEGE PARK	219	232	178	170	41	62	191	197
34 TEMPLE UNIVERSITY	209	215	159	163	50	52	192I	197I
35 UNIVERSITY OF ARIZONA	208	208	181	187	27	21	193	195
36 UNIVERSITY OF IOWA	207	200	178	165	29	35	190	177
37 AMERICAN UNIVERSITY	203	202	113	115	90	87	142	147
38 UNIV OF ILL CHICAGO CIR	193	208	158	169	35	39	166	182
39 SAN DIEGO STATE UNIV	193	135I	141	108I	52	27I	153	134I
40 SOUTHERN ILL U-CARBONDALE	192	193	173	177	19	16	181	184
TOTAL, 1ST 40 INSTS.	11,527	11,752	9,212	9,350	2,315	2,402	9,944	10,030
41 FLORIDA STATE UNIVERSITY	188	193	177	177	11	16	183	183
42 FLORIDA INST OF TECH	185	145	15	13	170	132	67	60
43 WAYNE STATE UNIVERSITY	185	204	128	85	57	119	146	125
44 LONG ISLAND UNIVERSITY	182I	174I	74I	73I	108I	101I	110I	105I
45 ARIZONA STATE UNIVERSITY	180	145	178	141	2	4	172	143
46 NORTHWESTERN UNIVERSITY	179	179	152	156	27	23	157	167
47 SUNY AT ALBANY	178	165	145	133	33	32	151	143
48 HARVARD UNIVERSITY	178	179	138	131	40	48	146	140
49 UNIVERSITY OF GEORGIA	177	174	167	168	10	6	171	170
50 UNIVERSITY OF PITTSBURGH	177E	166	147E	136	30E	30	162E	151
TOTAL, 1ST 50 INSTS.	13,336	13,476	10,533	10,563	2,803	2,913	11,410	11,420

SEE FOOTNOTES AT END OF TABLE.

TABLE B-47. -- SOCIAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1982 AND JANUARY 1983

- CONTINUED

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 UNIVERSITY OF KANSAS	174	222I	174	183I	0	39I	174I	204I
52 KANS ST U - AG & APP SCI	171	164	147	136	24	28	157	147
53 AUBURN UNIVERSITY	170	154	149	140	21	14	158	145
54 IOWA ST U OF SCI & TECH	164	162	147	139	17	23	156	153
55 LOUISIANA STATE UNIV	159	154	146	142	13	12	146	144
56 UNIV OF WIS-MILWAUKEE	159	155	77	111	82	44	111	125
57 UNIV OF CAL SANTA BARBARA	157	183	107	137	50	46	129	159
58 GEORGE WASHINGTON UNIV	156	171	94	97	62	74	115	124
59 UNIVERSITY OF UTAH	155	158	122	124	33	34	136	138
60 UNIV OF NC AT CHAPEL HILL	154	160	144	149	10	11	149	154
TOTAL, 1ST 60 INSTS.	14,955	15,159	11,840	11,921	3,115	3,238	12,843	12,916
61 U TENNESSEE KNOXVILLE	151	160	138	147	13	13	143	153
62 DUKE UNIVERSITY	148	144	124	130	24	14	140	135
63 PORTLAND STATE UNIVERSITY	146	176	105	110	41	66	104	138
64 YALE UNIVERSITY	145	221	129	172	16	49	136	197
65 UNIV OF MISSOURI COLUMBIA	141	120	128	117	13	3	134	117
66 WASHINGTON STATE UNIV	141I	140	87I	86	54I	54	87I	86I
67 UNIVERSITY OF COLORADO	138	184	134	173	4	11	136	178
68 SUNY AT BUFFALO	138	131	129	124	9	7	134	129
69 UNIV OF MASS AT AMHERST	137	137	124	124	13	13	128	128
70 UNIVERSITY OF CHICAGO	133	133	128	130	5	3	120	131
TOTAL, 1ST 70 INSTS.	16,373	16,705	13,066	13,234	3,307	3,471	14,107	14,309
71 OREGON STATE UNIVERSITY	131	87	104	77	27	10	104	81
72 SUNY AT STONY BROOK	131	124	111	109	20	15	117	114
73 UNIV OF SOUTHERN CAL	131I	128	94I	93	37I	35	111I	108
74 CUNY HUNTER COLLEGE	128	137	79	84	49	53	89	103
75 STANFORD UNIVERSITY	127	128	100	102	27	26	97	103
76 COLORADO STATE UNIVERSITY	127	131	126	129	1	2	126	124
77 UNIVERSITY OF DENVER	125	116	111	111	14	5	117	113
78 WESTERN MICHIGAN UNIV	125	139	111	117	14	22	114	121
79 UNIV OF SOUTH FLORIDA	124I	123	122I	121	2I	2	123I	122
80 PRINCETON UNIVERSITY	121	128	109	112	12	16	116	120
TOTAL, 1ST 80 INSTS.	17,643	17,946	14,133	14,289	3,510	3,657	15,224	15,423
81 BRIGHAM YOUNG UNIVERSITY	121	129	96	103	25	26	104	109
82 UNIV OF CAL DAVIS	120	172	100	137	20	35	116	151
83 ILLINOIS STATE UNIVERSITY	119	118	101	99	18	19	97	105
84 OKLAHOMA STATE UNIVERSITY	118	118	113	111	5	7	115	112
85 UNIVERSITY OF LOUISVILLE	116	111	88	72	28	39	97	83
86 SYRACUSE UNIVERSITY	115	172	109	143	6	29	112	157
87 GEORGETOWN UNIVERSITY	114	118	84	81	30	37	99	99
88 FORDHAM UNIVERSITY	114	126	66	88	48	38	82	105
89 EMORY UNIVERSITY	114I	111I	93I	91I	21I	20I	98I	95I
90 NORTHERN ILLINOIS UNIV	111	114	89	97	22	17	99	105
TOTAL, 1ST 90 INSTS.	18,805	19,235	15,072	15,311	3,733	3,924	16,246	16,548
91 KENT STATE UNIVERSITY	111	134	97	122	14	12	102	126
92 GEORGE MASON UNIVERSITY	110	78I	71	49I	39	29I	72	58I
93 UNIVERSITY OF NEW MEXICO	110	138	88	108	22	30	96	114
94 UNIV OF TEX AT ARLINGTON	108	108	96	95	12	13	99	100
95 UNIVERSITY OF DELAWARE	106	100	103	97	3	3	104	98
96 UNIVERSITY OF VIRGINIA	104	122	86	95	18	27	88	101
97 MIAMI UNIVERSITY (OHIO)	103	76	84	73	19	3	90	73
98 MISSISSIPPI STATE UNIV	102	137	99	134	3	3	100	135
99 UNIV OF ARK FAYETTEVILLE	102	81	93	72	9	9	95	75
100 UNIV OF NEBRASKA-LINCOLN	101	103	99	101	2	2	100	102
TOTAL, 1ST 100 INSTS.	19,862	20,312	15,988	16,257	3,874	4,055	17,196	17,533
TOTAL, ALL OTHER INSTS.	8,309	8,455	7,023	7,011	1,286	1,444	7,569	7,610

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-48. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT UNIVERSITIES AND COLLEGES: JANUARY 1978 AND JANUARY 1982-83

INSTITUTIONAL RANKING	R&D FTE			TOTAL FTE		
	1983	1982	1978	1983	1982	1978
TOTAL, ALL INSTITUTIONS	60,265	59,473	55,962	305,447	299,705	271,656
1 JOHNS HOPKINS UNIVERSITY	2,542	2,671I	693I	3,395	3,404	2,086
2 UNIV OF WIS-MADISON	1,906	1,825	1,724	3,506	3,474	3,334
3 UNIV OF CAL SAN FRANCISCO	1,122	913	315I	1,799	1,741	1,146I
4 YALE UNIVERSITY	1,102	1,237	1,029	1,832	2,113	1,755I
5 CORNELL UNIVERSITY	1,094I	1,075I	1,236	2,544I	2,344I	2,643
6 TEXAS A & M UNIVERSITY	987	946	596I	2,300	2,279	2,072
7 UNIV OF CAL DAVIS	974	818	401I	1,799	1,813	1,356I
8 LOUISIANA STATE UNIV	954	920	436	2,729	2,682	2,102
9 UNIV OF CAL SAN DIEGO	949	846	302I	1,491	1,436	993I
10 UNIV OF CAL LOS ANGELES	936	766E	593I	2,578	2,500	2,182I
TOTAL, 1ST 10 INSTS.	12,566	12,018	7,330	23,973	23,787	19,669
11 WASHINGTON UNIVERSITY	920	886	446	1,625	1,585	1,232
12 MASS INST OF TECHNOLOGY	845I	752I	880I	2,330	1,996	2,237
13 UNIV OF CAL BERKELEY	845	808	493I	1,814	1,884	1,770I
14 UNIVERSITY OF ARIZONA	823	732	459I	1,544	1,457	1,569
15 NEW YORK UNIVERSITY	802	590	732	1,597	1,620I	1,511
16 UNIVERSITY OF MICHIGAN	748	956	885	2,342	2,733	3,009
17 UNIVERSITY OF WASHINGTON	721	770	756	2,115I	2,236	2,333
18 DUKE UNIVERSITY	701	736	807	1,595	1,601E	1,442
19 HARVARD UNIVERSITY	671	887	818	5,890	5,871	4,261
20 UNIV OF TEXAS AT AUSTIN	668	644	570	1,737	1,684	1,774
TOTAL, 1ST 20 INSTS.	20,313	19,783	14,180	46,525	46,458	40,807
21 PENNSYLVANIA STATE UNIV	651	613	416	2,201	2,171	1,985
22 UNIV OF ILL URBANA	640	580	819	2,242	1,313E	2,163
23 U TEXAS SYSTEM CANCER CTR	633	657	624	834	865	801
24 COLUMBIA UNIV MAIN DIV	609	630	575I	1,928	1,919	1,721
25 UNIVERSITY OF CHICAGO	604	670	665	1,229	1,333	1,329
26 U TEX HLTH SCI CTR S ANTO	589	549	406	1,036	971	730
27 GEORGIA INSTITUTE OF TECH	579	524	567	1,125	1,103E	1,024
28 UNIV OF MISSOURI COLUMBIA	568	578	316I	1,243	1,281	1,142I
29 UNIVERSITY OF GEORGIA	552	534	519	1,168	1,146	1,166
30 OREGON STATE UNIVERSITY	545	520	598	1,104	1,100	1,113
TOTAL, 1ST 30 INSTS.	26,285	25,641	19,688	60,637	59,662	53,981
31 UNIV OF PENNSYLVANIA	541	613	972I	1,751	1,672	2,967I
32 STANFORD UNIVERSITY	525	547	1,045	1,050I	1,095	1,723
33 UNIVERSITY OF MINNESOTA	524	571	613	2,791	3,012	3,146
34 MICHIGAN STATE UNIVERSITY	512	519	355	1,734	1,748	1,674
35 KANS ST U - AG & APP SCI	501	395	217	1,153	1,145	862
36 CASE WESTERN RESERVE UNIV	465	441	489	1,459	1,393	1,318
37 UNIVERSITY OF ROCHESTER	459	518	594	1,208	1,147E	1,021
38 UNIV OF CAL RIVERSIDE	457	427	125I	612	666	392I
39 UNIVERSITY OF COLORADO	446	460	330I	1,476	1,491	1,281
40 UNIVERSITY OF IOWA	445	475	403	1,814	1,781	1,398
TOTAL, 1ST 40 INSTS.	31,161	30,609	24,836	75,686	74,813	69,763
41 NEW MEXICO STATE UNIV	442	425	119	1,150	1,110	467
42 HOWARD UNIVERSITY	439E	561I	294I	1,261	1,129I	913I
43 N C STATE UNIV AT RALEIGH	423	411	315	1,775	1,670	1,599
44 CUNY MT SINAI SCH OF MED	416I	409I	273I	1,301I	1,266I	802I
45 UNIVERSITY OF FLORIDA	415	277	305I	2,423	2,183	2,024
46 NORTHWESTERN UNIVERSITY	414	374E	307I	1,330	1,206	902
47 SUNY AT STONY BROOK	405	412	256	1,143	1,090	715
48 ROCKEFELLER UNIVERSITY	401	382	347	443	423	384
49 IOWA ST U OF SCI & TECH	385	380	407	1,434	1,376	1,226
50 UNIV OF MD COLLEGE PARK	383	344	149	1,355	1,320	1,322
TOTAL, 1ST 50 INSTS.	35,288	34,588	27,611	89,304	87,589	80,117

SEE FOOTNOTES AT END OF TABLE.

TABLE B-48. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT UNIVERSITIES AND COLLEGES: JANUARY 1978 AND JANUARY 1982-83

- CONTINUED

INSTITUTIONAL RANKING	R&D FTE			TOTAL FTE		
	1983	1982	1978	1983	1982	1978
51 UNIVERSITY OF CONNECTICUT	376	403	326	1,396	1,452	1,168
52 YESHIVA UNIVERSITY	374	374	290	988E	988	1,076
53 UNIV OF HAWAII-MANOA	370	342	359	1,138	1,145	1,123
54 UNIVERSITY OF KENTUCKY	366	301	375	1,708	1,984	1,285
55 CARNEGIE-MELLON UNIV	363I	360I	198I	587I	574I	528I
56 UNIVERSITY OF UTAH	359E	359I	378I	1,837	1,872	1,426
57 U TEX HLTH SCI CTR DALLAS	358	296	297	1,037	865	712
58 CALIFORNIA INST OF TECH	347	352	307I	534	537	722
59 RUTGERS THE ST UNIV OF NJ	342	365	365I	1,538	1,574	1,452I
60 UNIV OF NEBRASKA-LINCOLN	327	463	253	769	905	764
TOTAL, 1ST 60 INSTS.	38,872	38,207	30,765	100,838	99,489	90,373
61 BOSTON UNIVERSITY	313	225	226	1,044	1,020	705
62 UNIV OF SOUTHERN CAL	309I	214	454I	1,406I	1,368	1,624I
63 BAYLOR COL OF MEDICINE	301	268	271I	769	794E	705I
64 THE OREG HLTH SCI UNIV	300I	302I	319	612I	610I	622
65 UNIVERSITY OF NEW MEXICO	299	365	226	934	1,092	713
66 COLORADO STATE UNIVERSITY	298	338	217	1,011	1,039	875
67 VA POLYTECH INST & ST U	293	302	309	1,093	1,092	978
68 UNIV OF CAL IRVINE	292	248	151I	857	894	533I
69 UNIVERSITY OF VIRGINIA	289	304	229I	1,034I	1,065I	835I
70 INDIANA UNIVERSITY	283	310	291I	2,022	1,846E	1,579I
TOTAL, 1ST 70 INSTS.	41,852	41,085	33,460	111,624	110,311	99,542
71 MISSISSIPPI STATE UNIV	280	241	346E	699	712	632
72 PURDUE UNIVERSITY	280	284	260	2,181	2,204	1,690
73 UNIV ALABAMA BIRMINGHAM	279	267I	298	1,144	1,088	1,005
74 EMORY UNIVERSITY	279I	277I	256I	859I	837I	750I
75 UNIVERSITY OF KANSAS	264I	348I	347I	1,297I	1,427I	1,295I
76 VANDERBILT UNIVERSITY	264	296	284I	915	921	818I
77 UNIVERSITY OF CINCINNATI	261	153	223	1,179	1,187	872
78 GEORGETOWN UNIVERSITY	248	246	215I	884	869	667I
79 TEMPLE UNIVERSITY	236I	243I	262I	1,301I	1,271I	1,147I
80 WOODS HOLE OCNGRPHIC INST	228	210	168	228	210	233E
TOTAL, 1ST 80 INSTS.	44,475	43,654	36,123	122,314	121,040	108,651
81 AUBURN UNIVERSITY	228	227	225	1,083	979	790
82 UNIV OF ILL MED CTR CHGO	222	274	279	755	838	1,025
83 WASHINGTON STATE UNIV	218I	208I	317I	714I	710I	1,160I
84 OKLAHOMA STATE UNIVERSITY	217	201	204	749	740	676
85 PRINCETON UNIVERSITY	216	221	402	527	532	630
86 WAYNE STATE UNIVERSITY	213	214	363I	1,164	1,293	1,360I
87 UNIVERSITY OF DELAWARE	210	220	181	574	576	481
88 CLEMSON UNIVERSITY	210I	208	197	889I	888	789
89 SYRACUSE UNIVERSITY	209	55	219	552	534	537
90 VIRGINIA COMMONWLTH UNIV	208E	208I	253	883	862	969
TOTAL, 1ST 90 INSTS.	46,630	45,695	38,767	130,207	128,994	117,068
91 UNIVERSITY OF PITTSBURGH	208E	206	451I	1,945E	1,887E	1,708I
92 MED UNIV OF SO CAROLINA	204	68	167I	613	729	616I
93 UNIVERSITY OF OKLAHOMA	204I	125	22	1,058I	921	313
94 LOMA LINDA UNIVERSITY	202E	202I	176I	549I	614I	542I
95 OHIO STATE UNIVERSITY	201	274	544	2,388	2,182	2,984
96 GEORGE WASHINGTON UNIV	201	178	245	859	824	797
97 TUFTS UNIVERSITY	201I	180	88	503I	482	354
98 MONTANA STATE UNIVERSITY	185	121I	114I	526	509I	398I
99 UNIV OF NC AT CHAPEL HILL	184	181	288I	1,211	1,222	1,163
100 UTAH STATE UNIVERSITY	179	177	167	452	432	444
TOTAL, 1ST 100 INSTS.	48,605	47,411	41,033	140,315	138,799	126,387
TOTAL, ALL OTHER INSTS.	11,660	12,062	14,929	165,130	160,905	145,268

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-49. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY SEX: JANUARY 1980 AND JANUARY 1982-83

INSTITUTIONAL RANKING	WOMEN			MEN			TOTAL		
	1983	1982	1980	1983	1982	1980	1983	1982	1980
TOTAL, ALL INSTITUTIONS	53,080	50,677	44,215	219,875	217,094	210,775	272,955	267,771	254,990
1 HARVARD UNIVERSITY	875	783	596	3,582	3,404	3,078	4,457	4,187	3,674
2 UNIV OF WIS-MADISON	744	751	751	2,373	2,365	2,376	3,117	3,116	3,127
3 LOUISIANA STATE UNIV	669	596	608	1,958	1,963	1,951	2,627	2,559	2,559
4 UNIV OF CAL LOS ANGELES	657	555	181	1,532	1,539	1,208	2,189	2,094	1,389
5 UNIV OF CAL SAN FRANCISCO	537	511	227	912	821	711	1,449	1,332	938
6 UNIVERSITY OF PITTSBURGH	520E	489E	451I	1,260E	1,244E	1,185I	1,780E	1,733E	1,636
7 JOHNS HOPKINS UNIVERSITY	504	469	423	2,825	2,858	2,715	3,329	3,327	3,138
8 UNIVERSITY OF MINNESOTA	490	518	513	2,372	2,485	2,517	2,862	3,003	3,030
9 UNIVERSITY OF UTAH	449	457	199I	1,308	1,327	1,077I	1,757	1,784	1,276E
10 YALE UNIVERSITY	441	450I	417I	1,305	1,460I	1,427I	1,746	1,910	1,844
TOTAL, 1ST 10 INSTS.	5,886	5,579	4,366	19,427	19,466	18,245	25,313	25,045	22,611
11 CORNELL UNIVERSITY	432	407	366	2,019	1,878	1,965	2,451	2,285	2,331
12 UNIVERSITY OF FLORIDA	431	339	357	1,928	1,785	1,706	2,359	2,124	2,063
13 UNIVERSITY OF MICHIGAN	431	587	799	1,690	1,871	1,875	2,121	2,458	2,674
14 INDIANA UNIVERSITY	430	460E	298I	1,385	1,182E	1,144I	1,815	1,642E	1,442I
15 COLUMBIA UNIV MAIN DIV	396	412	363	1,374	1,354	1,310	1,770	1,766	1,673
16 UNIVERSITY OF WASHINGTON	374	390	394	1,454	1,551	1,596	1,828	1,941	1,990
17 MASS INST OF TECHNOLOGY	352	262	300	1,848	1,634	1,775	2,200	1,896	2,075
18 WASHINGTON UNIVERSITY	352	323	294	1,215	1,207	1,157	1,567	1,530	1,451
19 U TEXAS SYSTEM CANCER CTR	348	392	410I	451	447	400I	799	839	810I
20 UNIV OF MD BALT PROF SCH	347	207E	211	471	439E	511	818	646E	722
TOTAL, 1ST 20 INSTS.	9,779	9,358	8,158	33,262	32,814	31,684	43,041	42,172	39,842
21 U TEX HLTH SCI CTR HOUSTN	347	316	221	607	570	618	954	886	839
22 UNIV OF ILL URBANA	343	381E	283	1,797	1,865E	1,769	2,140	2,246E	2,052
23 UNIVERSITY OF IOWA	335	308	279	1,328	1,286	1,274	1,663	1,594	1,553
24 OHIO STATE UNIVERSITY	331	343	588	1,475	1,541	1,954	1,806	1,884	2,542
25 RUTGERS THE ST UNIV OF NJ	313	329	326	1,209	1,235	1,236	1,522	1,564	1,562
26 UNIVERSITY OF CONNECTICUT	313	342	287	994	995	949	1,307	1,337	1,236
27 UNIV OF P R-RIO PIEDRAS	303	319	192I	476	530	249I	779	849	441I
28 WAYNE STATE UNIVERSITY	300	332	305	750	756	756	1,050	1,088	1,061
29 U TEX HLTH SCI CTR DALLAS	296	58	112	644	720	623	940	778	735
30 CUNY MT SINAI SCH OF MED	293I	288I	276I	920I	904I	866I	1,213I	1,192I	1,142I
TOTAL, 1ST 30 INSTS.	12,953	12,374	11,027	43,462	43,216	41,978	56,415	55,590	53,005
31 UNIV OF CAL SAN DIEGO	290	274	80	1,039	996	868	1,329	1,270	948
32 PURDUE UNIVERSITY	286	275	174	1,741	1,774	1,552	2,027	2,049	1,726
33 UNIV OF CAL DAVIS	281	285	126	1,273	1,277	1,033	1,554	1,562	1,159
34 CASE WESTERN RESERVE UNIV	280	219	217	1,087	1,088	1,055	1,367	1,307	1,272
35 UNIV OF CAL BERKELEY	275	281	175	1,213	1,223	1,062	1,488	1,504	1,237
36 NEW YORK UNIVERSITY	271	293I	337	1,134	1,099I	1,072	1,405	1,392	1,409
37 UNIV OF PENNSYLVANIA	265	255	211	1,304	1,291	1,027	1,569	1,546	1,238
38 U TEX HLTH SCI CTR S ANTO	265	254	182I	674	672	627I	939	926	809I
39 UNIV OF TEXAS AT AUSTIN	263	235	334	1,361	1,334	1,323	1,624	1,569	1,657
40 UNIVERSITY OF KANSAS	260I	176I	173I	1,027I	1,096I	1,070I	1,287	1,272I	1,243I
TOTAL, 1ST 40 INSTS.	15,689	14,921	13,036	55,315	55,066	52,667	71,004	69,987	65,703
41 UNIV OF SOUTH CAROLINA	257	252	227	735	780	731	992	1,032	958
42 MICHIGAN STATE UNIVERSITY	257	258	251	1,437	1,443	1,418	1,694	1,701	1,669
43 UNIVERSITY OF NEW MEXICO	256	279	233	536	673	658	792	952	891
44 UNIVERSITY OF KENTUCKY	253	401	376	1,393	1,491	1,554	1,646	1,892	1,930
45 HOWARD UNIVERSITY	247	263I	252I	770	716I	686I	1,017	979I	938
46 DUKE UNIVERSITY	245	299E	236	1,257	1,264E	1,210	1,502	1,563E	1,446
47 CHEYNEY STATE COLLEGE	244I	236	111	225I	220	461	469I	456	571
48 MED UNIV OF SO CAROLINA	243	246E	222	535	524E	505	778	770E	727
49 SUNY AT STONY BROOK	240	224	134	854	828	761	1,094	1,052	895
50 UNIV OF ILL MED CTR CHGO	238	272	305	408	450	642	646	722	947
TOTAL, 1ST 50 INSTS.	18,169	17,651	15,283	63,465	63,455	60,878	81,634	81,106	76,161

SEE FOOTNOTES AT END OF TABLE.

TABLE B-49. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY SEX: JANUARY 1980 AND JANUARY 1982-83 - CONTINUED

INSTITUTIONAL RANKING	WOMEN			MEN			TOTAL		
	1983	1982	1980	1983	1982	1980	1983	1982	1980
51 BOSTON UNIVERSITY	233	263	271	652	623	646	885	886	917
52 GEORGETOWN UNIVERSITY	229	207	201	620	626	593	849	833	794
53 UNIVERSITY OF CHICAGO	229	242	236	1,026	1,078	1,085	1,255	1,320	1,321
54 PENNSYLVANIA STATE UNIV	227	220	213	1,858	1,851	1,795	2,085	2,071	2,008
55 UNIVERSITY OF MIAMI	227E	152	145I	938E	922	902I	1,165E	1,074	1,047
56 TEMPLE UNIVERSITY	221	217	193	882	903	897	1,103	1,120	1,090
57 UNIV OF MD COLLEGE PARK	220	196	162	1,056	1,011	924	1,276	1,207	1,086
58 UNIVERSITY OF ROCHESTER	216	177E	146	973	952E	921	1,189	1,129E	1,067
59 CITY COLLEGES OF CHICAGO	216	215	224	437	444	432	653	659	656
60 UNIVERSITY OF ARIZONA	215	194	194	1,253	1,198	1,145	1,468	1,392	1,339
TOTAL, 1ST 60 INSTS.	20,402	19,734	17,268	73,160	73,063	70,218	93,562	92,797	87,486
61 NORTHWESTERN UNIVERSITY	212	149	140	1,040	962	704	1,252	1,111	844
62 UNIV OF HAWAII-MANOA	212	210	194	811	833	799	1,023	1,043	993
63 UNIVERSITY OF COLORADO	212	202	203	1,204	1,223	1,210	1,416	1,425	1,413
64 UNIV OF P R-MED SCI CMPUS	212	207	137I	310	302	255I	522	509	392I
65 UNIV OF MISSOURI COLUMBIA	209	226	141	987	1,014	959	1,196	1,240	1,100
66 SUNY DOWNSTATE MED CTR	202I	202I	196	493I	491I	482	695I	693I	678
67 UNIV OF SOUTHERN CAL	199I	196E	196	1,097I	1,078E	1,078	1,296I	1,274E	1,274
68 YESHIVA UNIVERSITY	197I	197I	193I	669I	669I	654I	866E	866E	847
69 NORTHEASTERN UNIVERSITY	197I	195	113	493I	483	329	690I	678	442
70 IOWA ST U OF SCI & TECH	190	168	176	1,168	1,132	1,303	1,358	1,300	1,479
TOTAL, 1ST 70 INSTS.	22,444	21,686	18,957	81,432	81,250	77,991	103,876	102,936	96,948
71 UNIV OF NC AT CHAPEL HILL	187	185	173	1,007	1,021	1,013	1,194	1,206	1,186
72 WEST VIRGINIA UNIVERSITY	186	194	204	871	827	880	1,057	1,021	1,084
73 NEW MEXICO STATE UNIV	186	170	107	930	901	683	1,116	1,071	790
74 UNIVERSITY OF CINCINNATI	185	183	132	930	940	827	1,115	1,123	959
75 TEXAS WOMAN'S UNIVERSITY	174	63E	67	77	63E	60	251	126E	127
76 UNIV ALABAMA BIRMINGHAM	173	162	146	930	887	884	1,103	1,049	1,030
77 UNIVERSITY OF VIRGINIA	167I	166I	110	875I	881I	796	1,042	1,047	906
78 NEW YORK MEDICAL COLLEGE	165	149	107I	465	470	379I	630	619	486I
79 UNIV OF CAL IRVINE	164	141	62	607	558	451	771	699	513
80 U OF ARKANSAS MED SCI CAM	161	153	134	568	578	545	729	731	679
TOTAL, 1ST 80 INSTS.	24,192	23,252	20,199	88,692	88,376	84,509	112,884	111,628	104,708
81 U TENNESSEE KNOXVILLE	161	163	152	668	687	718	829	850	870
82 N C STATE UNIV AT RALEIGH	155	131	141	1,570	1,491	1,436	1,725	1,622	1,577
83 VIRGINIA COMMONWLTH UNIV	155	163	145	694	669	673	849	832	818
84 UNIVERSITY OF OKLAHOMA	154	100	200	812	817	749	966	917	949
85 THE OREG HLTH SCI UNIV	153I	153I	167	363I	362I	391	516I	515I	558
86 BAYLOR COL OF MEDICINE	152	138	130	640	631	608	792	769	738
87 COL OF MED & DENT OF N J	148I	148E	148	608I	606E	606	756I	754E	754
88 TEXAS A & M UNIVERSITY	147	133	110	2,153	2,146	2,058	2,300	2,279	2,168
89 UNIVERSITY OF MISSISSIPPI	144	162	87	456	451	432	600	614	519
90 GEORGE WASHINGTON UNIV	142	122	146	497	490	480	639	612	626
TOTAL, 1ST 90 INSTS.	25,703	24,666	21,625	97,153	96,726	92,660	122,856	121,392	114,285
91 SOUTHERN ILL U-CARBONDALE	140	136	88	661	657	598	801	793	686
92 KANS ST U - AG & APP SCI	140	149	105	914	901	814	1,054	1,050	919
93 UNIV TENN CTR HEALTH SCI	137	140	174	391	412	432	528	552	606
94 EMORY UNIVERSITY	135I	133I	129I	685I	673I	643I	820I	806I	772I
95 CLEMSON UNIVERSITY	132I	132	74I	752I	750	767I	884I	882	841
96 VANDERBILT UNIVERSITY	130	128	90	759	764	622	889	892	712
97 FLORIDA STATE UNIVERSITY	128	116	74	538	535	454	666	651	528
98 INTER AM U PR-SAN GERMAN	128	112	73I	131	123	88I	259	235	161I
99 SUNY AT BUFFALO	127	124	121E	774	766	757E	901	890	878E
100 ARIZONA STATE UNIVERSITY	126	140	45I	599	585	632I	725	725	677
TOTAL, 1ST 100 INSTS.	27,026	25,976	22,598	103,357	102,892	98,467	130,383	128,868	121,065
TOTAL, ALL OTHER INSTS.	26,054	24,701	21,617	116,518	114,202	112,308	142,572	138,903	133,925

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-50. -- PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY SEX: JANUARY 1980 AND JANUARY 1982-83

INSTITUTIONAL RANKING	WOMEN			MEN			TOTAL		
	1983	1982	1980	1983	1982	1980	1983	1982	1980
TOTAL, ALL INSTITUTIONS	22,452	21,098	17,443	63,417	60,441	51,816	85,869	81,539	69,259
1 OHIO STATE UNIVERSITY	608	465	168	2,363	1,883	938	2,971	2,348	1,106
2 HARVARD UNIVERSITY	404	332	266	1,854	1,783	1,627	2,258	2,115	1,893
3 CMTY COL ALLEGHENY COUNTY	356I	314I	255I	854I	749I	604I	1,210I	1,063I	859I
4 UNIV OF CAL LOS ANGELES	319	286	257I	490	519	774I	809	805	1,031
5 UNIV OF WIS-MADISON	282	269	261	396	344	376	678	613	637
6 UNIV OF CAL SAN FRANCISCO	257	266	91I	463	515	324I	720	781	415
7 INDIANA UNIVERSITY	224	234E	166I	475	407E	366I	699	641E	532I
8 UNIV OF CAL BERKELEY	219	230	249I	523	581	749I	742	811	998
9 UNIV OF PENNSYLVANIA	217	91	73	599	259	216	816	350	289
10 UNIVERSITY OF WASHINGTON	201	197	156	379	382	383	580	579	539
TOTAL, 1ST 10 INSTS.	3,087	2,684	1,942	8,396	7,422	6,357	11,483	10,106	8,299
11 NORTHEASTERN UNIVERSITY	173I	161	47	636I	593	184	809I	754	231
12 UNIV OF CAL DAVIS	167	158	94I	284	313	285I	451	471	379
13 NEW YORK UNIVERSITY	152	144I	161	538	550I	480	690	694	641
14 INTER AM U PR-SAN GERMAN	147	108	61I	292	256	120I	439	364	181I
15 BOSTON UNIVERSITY	146	139	83	341	285	249	487	424	332
16 UNIVERSITY OF MICHIGAN	146	204	199	355	402	415	501	606	614
17 LOUISIANA STATE UNIV	140	126	104	389	387	404	529	513	508
18 GEORGE WASHINGTON UNIV	131	99	101	470	429	439	601	528	540
19 INTER AM U PR-CTRL OFF	131	87	94	251	229	208	382	316	302
20 UNIV OF ILL URBANA	124	119E	81	148	202F	210	272	317E	291
TOTAL, 1ST 20 INSTS.	4,544	4,025	2,967	12,100	11,068	9,351	16,644	15,093	12,318
21 UNIVERSITY OF MINNESOTA	123	144	157	344	387	433	467	531	590
22 CALIF ST UNIV LONG BEACH	118	55I	58	257	196I	187	375	251I	245
23 UNIVERSITY OF IOWA	115	111	112	218	206	171	333	317	283
24 COLUMBIA UNIV MAIN DIV	114	105	104	350	356	348	464	461	452
25 CUYAHOGA CMTY COL DIST	110I	97I	80I	325I	285I	229I	435I	382I	309I
26 UNIV OF MD BALT PROF SCH	109	65E	74	345	313E	207	454	378E	281
27 MERCY COLLEGE	105I	98I	82	164I	154I	126	269I	252I	208
28 ST LOUIS COMMUNITY COL	105I	92	101	279I	245	27I	384I	337	37I
29 UNIV OF CAL SAN DIEGO	103	100	34I	210	195	106I	313	295	140
30 PENNSYLVANIA STATE UNIV	102	80	63	149	132	107	251	212	170
TOTAL, 1ST 30 INSTS.	5,648	4,972	3,741	14,741	13,537	11,292	20,389	18,509	15,033
31 PURDUE UNIVERSITY	101	112	65	280	272	205	381	384	270
32 UNIVERSITY OF CONNECTICUT	101	98	103	163	158	182	264	256	285
33 SINCLAIR COMMUNITY COL	100	54	24	244	243	117	344	297	141
34 WAYNE STATE UNIVERSITY	98	164	129	225	375	272	323	539	401
35 YALE UNIVERSITY	98	137I	124I	73	258I	191I	171	395	315
36 SAN FRANCISCO STATE UNIV	96	67	117	164	131	218	260	198	335
37 UNIVERSITY OF NEW MEXICO	94	108	88	217	230	222	311	338	310
38 HOWARD UNIVERSITY	94	190I	165I	842	462I	396I	936	652I	561
39 CALIF ST UNIV FULLERTON	93	70	48I	176	160	122I	269	230	170I
40 THE OREG HLTH SCI UNIV	91I	91I	76	177I	175I	172	268I	266I	248
TOTAL, 1ST 40 INSTS.	6,614	6,063	4,680	17,302	16,001	13,389	23,916	22,064	18,069
41 SAN DIEGO CITY COLLEGE	86I	76I	5	185I	162I	19	271I	238I	24
42 UNIV OF HAWAII-MANOA	86	68	66	207	212	186	293	280	252
43 HILLSBOROUGH CMTY COLLEGE	83I	74I	65	189I	165I	89	272I	239I	154
44 KANS ST U - AG & APP SCI	83	83	53	111	104	158	194	187	211
45 U TEX HLTH SCI CTR DALLAS	82	17	25	215	254	124	297	271	149
46 UNIVERSITY OF PITTSBURGH	82E	59E	66I	248E	250E	216I	330E	309E	282
47 UNIV OF SOUTHERN CAL	80I	74E	74	276I	258E	258	356I	332E	332
48 MONTGOMERY COLLEGE	79I	71I	60I	249I	217I	173I	328I	288I	233I
49 UNIV OF TEXAS AT AUSTIN	76	78	111	154	167	176	230	245	287
50 PORTLAND COMMUNITY COL	75	75I	30I	102	99I	58I	177	174I	88I
TOTAL, 1ST 50 INSTS.	7,426	6,738	5,235	19,238	17,889	14,846	26,664	24,627	20,081

SEE FOOTNOTES AT END OF TABLE.

TABLE B-50. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY SEX: JANUARY 1980 AND JANUARY 1982-83

- CONTINUED

INSTITUTIONAL RANKING	WOMEN			MEN			TOTAL		
	1983	1982	1980	1983	1982	1980	1983	1982	1980
51 UNIV OF CAL IRVINE	73	63	22I	119	133	75I	192	196	97
52 TUFTS UNIVERSITY	72I	68	38	389I	361	234	461I	429	272
53 CORNELL UNIVERSITY	72	55	40	102	75	82	174	130	122
54 UNIV OF ILL MED CTR CHGO	72	77	87	194	198	626	266	275	713
55 CUNY HUNTER COLLEGE	70	48	53I	97	66	117I	167	114	170I
56 MASS INST OF TECHNOLOGY	70	59	61	186	142	230	256	201	291
57 WAYNE COUNTY CMTY COLLEGE	69I	62I	52	111I	96I	76	180I	158I	128
58 JOHN F KENNEDY UNIVERSITY	69I	63	59	94I	86	88	163I	149	147
59 PACE UNIVERSITY	69I	69	40I	183I	183	113I	252	252	153I
60 NORTHERN VA COMMUNITY COL	68	64	16	289	267	42	357	331	58
TOTAL, 1ST 60 INSTS.	8,130	7,366	5,703	21,002	19,496	16,529	29,132	26,862	22,232
61 WILLIAM RAINEY HARPER COL	67	50	49	125	98	95	192	148	144
62 LAWRENCE INST OF TECH	66I	62I	54I	143I	134I	108I	209I	196I	162I
63 HOUSTON COMMUNITY COLLEGE	66I	58I	33I	142I	125I	72I	208I	183I	105I
64 BERGEN COMMUNITY COLLEGE	65I	58I	47	91I	79I	63	156I	137I	110
65 PARKLAND COLLEGE	65I	57I	36	98I	86I	34	163I	143I	70
66 COLUMBUS TECHNICAL INST	65	22	28I	150	107	100I	215	129	128I
67 UNIV OF MD COLLEGE PARK	63	69	66	164	158	163	227	227	229
68 CUNY QUEENS COLLEGE	63I	61	54	119I	110	119	182I	171	173
69 YOUNGSTOWN ST UNIVERSITY	59	31	34	131	116	91	190	147	125
70 UNIV OF MISSOURI COLUMBIA	58	42	31	79	69	65	137	111	96
TOTAL, 1ST 70 INSTS.	8,767	7,876	6,135	22,244	20,578	17,439	31,011	28,454	23,574
71 U TEX HLTH SCI CTR S ANTO	56	24	27I	188	120	105I	244	144	132I
72 UNIVERSITY OF LOUISVILLE	56	40	38	137	170	182	193	210	220
73 UNIV OF WIS-MILWAUKEE	56	46	55	185	103	103	241	149	158
74 TIDEWATER COMMUNITY COL	56	54	46	106	117	92	162	171	138
75 KEAN COL OF NEW JERSEY	55I	52E	31I	137I	128E	66I	192I	180E	97I
76 LOYOLA UNIV - CHICAGO	55	62	50	223	223	241	278	285	291
77 UNIVERSITY OF UTAH	54	53	101I	178	183	301I	232	238	402E
78 MIAMI-DADE CMTY COLLEGE	54	49	54	165	174	151	219	223	205
79 SUNY BROOME CMTY COL	53	39	2I	34	29	6I	87	68	8I
80 OREGON STATE UNIVERSITY	53	53	24I	101	60	77I	154	113	101
TOTAL, 1ST 80 INSTS.	9,315	8,350	6,563	23,698	21,885	18,763	33,013	30,235	25,326
81 SAN JOSE STATE UNIVERSITY	52	68	82I	234	244	273I	286	312	355I
82 OAKTON COMMUNITY COLLEGE	52	32	21	109	72	30	161	104	51
83 YESHIVA UNIVERSITY	51I	51I	44I	205I	205I	178I	256E	256E	222
84 NEW YORK MEDICAL COLLEGE	51	39	33I	183	196	189I	234	235	222I
85 U TEX HLTH SCI CTR HOUSTN	51	55	35	110	162	175	161	217	210
86 UNIVERSITY OF KENTUCKY	50	85	79	142	189	221	192	274	300
87 MARQUETTE UNIVERSITY	49	40	21	175	206	184	224	246	205
88 CALIF STATE UNIV FRESNO	49I	42E	12I	68I	63E	41I	117	105	53
89 MICHIGAN STATE UNIVERSITY	48	35	46	52	75	103	100	110	149
90 IOWA ST U OF SCI & TECH	48	39	45	77	96	73	125	135	118
TOTAL, 1ST 90 INSTS.	9,816	8,836	6,981	25,053	23,393	20,230	34,869	32,229	27,211
91 METROPOLITAN STATE COL	48	-C	-C	138	-C	-C	186	-C	-C
92 CUNY COL STATEN ISLAND	48	37I	6I	124	90I	17I	172	127I	23I
93 MONTANA STATE UNIVERSITY	48	23I	12I	53	43I	39I	101	66I	51I
94 CALIF ST UNIV NORTHRIDGE	48E	48	51	135E	135	154	183E	183	205
95 UNIVERSITY OF ARIZONA	48	39	29	136	112	135	184	151	164
96 CALIF STATE UNIV CHICO	47I	46	37	88I	81	57	135I	127	94
97 GEORGE MASON UNIVERSITY	47	23I	23I	86	55I	51I	133	78I	74I
98 COUNTY COLLEGE OF MORRIS	47I	38I	20	120I	109I	57	-C	-C	77
99 SUNY NASSAU CMTY COLLEGE	47	35	41	313	144	119	360	179	160
100 SUNY SUFFOLK CO CMTY COL	47I	42I	28I	149I	130I	67I	196I	172I	95
TOTAL, 1ST 100 INSTS.	10,291	9,220	7,265	26,395	24,430	21,040	36,686	33,650	28,305
TOTAL, ALL OTHER INSTS.	12,161	11,878	10,178	37,022	36,011	30,776	49,183	47,889	40,954

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DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-51. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	272955	53080	28816	1013	28376	2684	8688	821	29893	5303	118868	30897	16788	4451	41526	7911
1 HARVARD UNIVERSITY	4457	875	40	0	235	17	50	6	56	8	3895	809	43	15	138	20
2 JOHNS HOPKINS UNIVERSITY	3329	504	963	13	410	25	33	4	213	41	1520	370	33	5	157	46
3 UNIV OF WIS-MADISON	3117	744	309	26	197	8	201	29	199	21	1737	516	166	58	308	86
4 UNIVERSITY OF MINNESOTA	2862	490	193	3	162	9	30	3	163	21	1717	324	109	25	488	105
5 LOUISIANA STATE UNIV	2627	669	155	2	133	2	103	20	156	32	1897	579	37	8	146	26
6 CORNELL UNIVERSITY	2451	432	340	15	234	21	32	3	75	14	1388	278	110	39	272	62
7 UNIVERSITY OF FLORIDA	2359	431	221	4	97	1	21	1	75	5	1658	372	47	9	240	39
8 TEXAS A & M UNIVERSITY	2300	147	412	9	103	2	84	4	137	9	1075	57	48	9	441	57
9 MASS INST OF TECHNOLOGY	2200	352	756	63	509	39	96	17	165	11	409	161	55	24	210	37
10 UNIV OF CAL LOS ANGELES	2189	657	174	14	148	27	84	12	66	5	1448	531	71	19	198	49
TOTAL, 1ST 10 INSTS.	27891	5301	3563	149	2228	151	734	99	1305	167	16744	3997	719	211	2598	527
11 UNIV OF ILL URBANA	2140	343	377	16	260	26	116	18	232	42	729	154	133	35	293	52
12 UNIVERSITY OF MICHIGAN	2121	431	334	29	206	17	53	2	102	7	1042	270	105	33	279	73
13 PENNSYLVANIA STATE UNIV	2085	227	622	19	196	11	89	5	188	38	713	112	74	15	203	27
14 PURDUE UNIVERSITY	2027	286	533	21	253	24	26	1	223	40	701	156	91	22	200	22
15 UNIVERSITY OF WASHINGTON	1828	374	263	15	134	9	145	24	77	4	993	273	46	14	170	35
16 INDIANA UNIVERSITY	1815	430	45	3	201	13	55	2	172	20	936	316	121	24	285	52
17 OHIO STATE UNIVERSITY	1806	331	250	13	116	10	38	4	148	16	966	238	46	8	242	42
18 UNIVERSITY OF PITTSBURGH	1780	520	161	8	158	11	16	0	122	19	1113	422	63	30	147	30
19 COLUMBIA UNIV MAIN DIV	1770	396	113	6	119	10	191	44	47	4	1059	289	16	5	225	38
20 UNIVERSITY OF UTAH	1757	449	150	9	139	12	54	5	83	7	1169	371	40	5	122	40
TOTAL, 1ST 20 INSTS.	47020	9088	6411	288	4010	294	1517	204	2699	364	26165	6598	1454	402	4764	938
21 YALE UNIVERSITY	1746	441	41	0	128	7	22	1	59	6	1329	394	38	20	129	13
22 N C STATE UNIV AT RALEIGH	1725	155	314	16	92	9	34	1	152	19	939	81	21	4	173	25
23 MICHIGAN STATE UNIVERSITY	1694	257	124	1	194	16	38	1	129	10	818	157	109	30	282	42
24 UNIVERSITY OF IOWA	1663	335	68	0	95	4	13	0	94	10	1182	288	33	8	178	25
25 UNIVERSITY OF KENTUCKY	1646	253	142	4	117	19	52	6	108	23	955	164	53	13	219	24
26 UNIV OF TEXAS AT AUSTIN	1624	263	242	11	378	28	184	30	212	34	211	63	109	26	288	71
27 UNIV OF PENNSYLVANIA	1569	265	86	6	91	7	6	0	83	8	1032	200	27	7	244	37
28 WASHINGTON UNIVERSITY	1567	352	57	1	72	5	0	0	86	12	1251	322	30	6	71	6
29 UNIV OF CAL DAVIS	1554	281	75	4	64	6	16	0	46	6	1231	233	22	4	100	28
30 RUTGERS THE ST UNIV OF NJ	1522	313	120	8	175	25	63	6	212	28	408	81	128	39	416	126
TOTAL, 1ST 30 INSTS.	63330	12003	7680	339	5416	420	1945	249	3880	520	35521	8581	2024	559	6864	1335
31 DUKE UNIVERSITY	1502	245	46	0	47	1	18	1	40	3	1203	210	24	3	124	27
32 UNIV OF CAL BERKELEY	1488	275	317	29	186	15	86	13	84	7	557	138	59	22	199	51
33 UNIVERSITY OF ARIZONA	1468	215	156	3	191	9	104	5	116	11	637	135	83	23	181	29
34 UNIV OF CAL SAN FRANCISCO	1449	537	0	0	0	0	0	0	0	0	1449	537	0	0	0	0
35 UNIVERSITY OF COLORADO	1416	212	145	5	196	21	79	14	86	9	684	118	92	26	134	19
36 NEW YORK UNIVERSITY	1405	271	26	0	72	7	0	0	155	10	903	190	70	24	179	40
37 CASE WESTERN RESERVE UNIV	1367	280	121	3	80	1	7	0	46	5	1070	261	13	3	30	7
38 IOWA ST U OF SCI & TECH	1358	190	363	36	82	8	16	0	150	19	576	100	24	4	147	23
39 UNIV OF CAL SAN DIEGO	1329	290	25	2	163	20	251	39	74	4	722	206	22	6	72	13
40 UNIVERSITY OF CONNECTICUT	1307	313	138	13	61	4	31	3	52	7	697	187	118	34	210	65
TOTAL, 1ST 40 INSTS.	77419	14831	9017	430	6494	506	2537	324	4683	595	44019	10663	2529	704	8140	1609
41 UNIV OF SOUTHERN CAL	1296	199	130	2	87	7	15	0	39	1	892	168	39	6	94	15
42 UNIVERSITY OF KANSAS	1287	260	124	2	81	6	67	9	59	5	614	161	168	36	174	41
43 UNIV OF MD COLLEGE PARK	1276	220	193	9	342	46	30	4	153	24	336	89	44	10	178	38
44 UNIVERSITY OF CHICAGO	1255	229	48	1	164	13	45	2	59	1	771	191	40	7	128	14
45 NORTHWESTERN UNIVERSITY	1252	212	160	6	145	15	16	2	105	10	624	148	50	13	152	18
46 CUNY MT SINAI SCH OF MED	1213	293	27	0	28	2	4	1	19	2	1110	283	4	1	21	4
47 UNIV OF MISSOURI COLUMBIA	1196	209	109	4	43	1	25	2	53	5	796	165	42	11	128	21
48 UNIV OF NC AT CHAPEL HILL	1194	187	38	0	78	7	21	1	56	3	816	134	41	10	144	32
49 UNIVERSITY OF ROCHESTER	1189	216	46	1	169	9	8	1	57	6	799	184	43	9	67	6
50 UNIVERSITY OF MIAMI	1165	227	69	1	35	0	101	5	49	5	832	208	36	5	43	3
TOTAL, 1ST 50 INSTS.	89742	17083	9961	456	7666	612	2869	351	5332	657	51609	12394	3036	812	9269	1801
TOTAL, ALL OTHER INSTS.	183213	35997	18855	557	20710	2072	5819	470	24561	4646	67259	18503	13752	3639	32257	6110

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-52. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	85869	22452	8880	449	6284	1368	1456	306	15746	4296	32656	9505	6907	2751	13940	3777
1 OHIO STATE UNIVERSITY	2971	608	66	7	54	11	10	0	87	16	2446	431	27	9	281	134
2 HARVARD UNIVERSITY	2258	404	10	1	20	3	1	0	7	3	2172	387	8	3	40	7
3 CMTY COL ALLEGHENY COUNTY	1210	356	127	1	191	49	0	0	331	99	213	77	181	79	167	51
4 HOWARD UNIVERSITY	936	94	23	2	4	0	0	0	6	0	890	90	0	0	13	2
5 UNIV OF PENNSYLVANIA	816	217	160	28	153	21	3	2	53	6	299	99	36	19	112	42
6 NORTHEASTERN UNIVERSITY	809	173	126	4	120	18	11	0	221	27	128	63	60	15	143	46
7 UNIV OF CAL LOS ANGELES	809	319	67	7	57	9	21	2	5	1	567	256	25	14	67	30
8 UNIV OF CAL BERKELEY	742	219	141	20	179	36	22	3	26	4	263	96	32	23	79	37
9 UNIV OF CAL SAN FRANCISCO	720	257	0	0	0	0	0	0	0	0	720	257	0	0	0	0
10 INDIANA UNIVERSITY	699	224	49	6	41	8	16	4	130	40	321	125	54	18	88	23
TOTAL, 1ST 10 INSTS.	11970	2871	769	76	819	155	84	11	866	196	8019	1881	423	180	990	372
11 NEW YORK UNIVERSITY	690	152	4	0	9	3	3	2	36	10	440	70	77	33	121	34
12 UNIV OF WIS-MADISON	678	282	60	20	32	12	34	9	34	9	368	171	31	18	119	43
13 GEORGE WASHINGTON UNIV	601	131	129	2	26	5	12	0	71	7	256	70	45	30	62	17
14 PHILA COL OSTEOPATHIC MED	597	10	0	0	0	0	0	0	0	0	597	10	0	0	0	0
15 UNIVERSITY OF WASHINGTON	580	201	41	6	32	3	22	5	18	4	395	166	13	3	59	14
16 LOUISIANA STATE UNIV	529	140	14	0	15	6	9	7	17	7	457	113	4	2	13	5
17 UNIVERSITY OF MICHIGAN	501	146	73	10	14	6	5	1	2	2	340	85	31	20	36	22
18 BOSTON UNIVERSITY	487	146	54	4	18	3	8	2	96	12	164	65	23	5	124	55
19 UNIVERSITY OF MINNESOTA	467	123	51	4	7	3	0	0	25	2	324	84	10	6	50	24
20 COLUMBIA UNIV MAIN DIV	464	114	34	0	9	0	4	2	13	0	293	85	2	1	109	26
TOTAL, 1ST 20 INSTS.	17564	4316	1229	122	981	196	181	39	1178	249	11653	2800	659	298	1683	612
21 TUFTS UNIVERSITY	461	72	14	1	3	1	0	0	9	3	416	61	4	3	15	3
22 UNIV OF MD BALT PROF SCH	454	109	0	0	0	0	0	0	0	0	433	101	0	0	21	8
23 UNIV OF CAL DAVIS	451	167	39	3	20	6	1	1	3	1	366	146	2	1	20	9
24 INTER AM U PR-SAN GERMAN	439	147	8	0	37	8	2	0	84	16	101	48	54	21	153	54
25 WASHINGTON STATE UNIV	436	38	82	2	13	2	5	0	31	3	245	22	6	0	54	9
26 CUYAHOGA CMTY COL DIST	435	110	63	0	40	8	1	0	142	39	39	14	53	23	97	26
27 FAIRLEIGH DICKINSON UNIV	391	46	49	2	29	7	3	0	48	11	203	18	25	7	34	1
28 ST LOUIS COMMUNITY COL	384	105	67	2	33	10	3	0	135	27	82	47	20	6	44	13
29 INTER AM U PR-CTRL OFF	382	131	9	0	35	7	6	0	76	15	141	78	50	23	65	8
30 PURDUE UNIVERSITY	381	101	101	1	28	5	3	1	98	36	80	46	20	7	51	5
TOTAL, 1ST 30 INSTS.	21778	5342	1661	133	1219	250	205	41	1804	400	13759	3381	893	389	2237	748
31 CALIF ST UNIV LONG BEACH	375	118	90	7	45	11	10	3	49	18	77	52	23	8	81	19
32 SUNY NASSAU CMTY COLLEGE	360	47	20	0	53	5	0	0	175	22	37	9	24	8	51	3
33 NORTHERN VA COMMUNITY COL	357	68	79	2	25	7	5	2	150	12	54	28	20	11	24	6
34 UNIV OF SOUTHERN CAL	356	80	21	0	11	2	0	0	5	0	270	64	12	0	37	14
35 SINCLAIR COMMUNITY COL	344	100	67	4	16	2	4	1	94	22	67	53	26	11	70	7
36 UNIVERSITY OF IOWA	333	115	9	1	5	1	1	1	4	1	276	99	9	1	29	11
37 UNIVERSITY OF PITTSBURGH	330	82	22	4	10	1	5	0	74	24	180	40	9	3	30	10
38 MONTGOMERY COLLEGE	328	79	21	0	35	5	1	0	66	19	25	9	40	17	140	29
39 WAYNE STATE UNIVERSITY	323	98	38	11	25	7	1	1	34	11	138	42	30	9	57	17
40 SUNY AT BUFFALO	321	44	20	3	7	0	0	0	0	0	282	38	3	1	9	2
TOTAL, 1ST 40 INSTS.	25205	6173	2048	165	1451	291	232	49	2455	529	15165	3815	1089	458	2765	866
41 UNIV OF CAL SAN DIEGO	313	103	6	0	28	3	33	13	15	2	200	77	15	3	16	5
42 UNIVERSITY OF NEW MEXICO	311	94	68	6	36	6	16	3	28	12	133	57	8	2	22	8
43 CHAPMAN COLLEGE	298	44	24	0	15	2	7	1	87	7	43	11	76	16	46	7
44 U TEX HLTH SCI CTR DALLAS	297	82	0	0	0	0	0	0	3	1	286	79	8	2	0	0
45 UNIV OF HAWAII-MANOA	293	86	10	0	7	3	7	1	15	1	195	56	6	2	53	23
46 CUNY MT SINAI SCH OF MED	290	44	3	0	1	0	0	0	0	0	286	44	0	0	0	0
47 STANFORD UNIVERSITY	290	45	126	3	30	2	13	1	44	10	39	15	11	6	27	8
48 SAN JOSE STATE UNIVERSITY	286	52	97	2	26	7	18	0	55	14	15	6	9	4	64	19
49 LOYOLA UNIV - CHICAGO	278	55	0	0	9	2	0	0	23	3	196	34	25	11	25	5
50 HILLSBOROUGH CMTY COLLEGE	272	83	7	0	15	3	0	0	49	22	49	30	38	18	114	10
TOTAL, 1ST 50 INSTS.	28133	6861	2389	176	1620	319	326	68	2774	601	16607	4224	1285	522	3132	951
TOTAL, ALL OTHER INSTS.	57736	15591	6491	273	4664	1049	1130	238	12972	3695	16049	5281	5622	2229	10808	2826

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-53. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	190544	37044	21159	769	18667	1696	6999	634	22170	4030	80059	21226	11761	3070	29729	5619
1 UNIV OF WIS-MADISON	3117	744	309	26	197	8	201	29	199	21	1737	516	166	58	308	86
2 UNIVERSITY OF MINNESOTA	2862	490	193	3	162	9	30	3	163	21	1717	324	109	25	488	105
3 LOUISIANA STATE UNIV	2627	669	155	2	133	2	103	20	156	32	1897	579	37	8	146	26
4 UNIVERSITY OF FLORIDA	2359	431	221	4	97	1	21	1	75	5	1658	372	47	9	240	39
5 TEXAS A & M UNIVERSITY	2300	147	412	9	103	2	84	4	137	9	1075	57	48	9	441	57
6 UNIV OF CAL LOS ANGELES	2189	657	174	14	148	27	84	12	66	5	1448	531	71	19	198	49
7 UNIV OF ILL URBANA	2140	343	377	16	260	26	116	18	232	42	729	154	133	35	293	52
8 UNIVERSITY OF MICHIGAN	2121	431	334	29	206	17	53	2	102	7	1042	270	105	33	279	73
9 PENNSYLVANIA STATE UNIV	2085	227	622	19	196	11	89	5	188	38	713	112	74	15	203	27
10 PURDUE UNIVERSITY	2027	286	533	21	253	24	26	1	223	40	701	156	91	22	200	22
TOTAL, 1ST 10 INSTS.	23827	4425	3330	143	1755	127	807	95	1541	220	12717	3071	881	233	2796	524
11 UNIVERSITY OF WASHINGTON	1828	374	263	15	134	9	145	24	77	4	993	273	46	14	170	35
12 INDIANA UNIVERSITY	1815	430	45	3	201	13	55	2	172	20	936	316	121	24	285	52
13 OHIO STATE UNIVERSITY	1806	331	250	13	116	10	38	4	148	16	966	238	46	8	242	42
14 UNIVERSITY OF PITTSBURGH	1780	520	161	8	158	11	16	0	122	19	1113	422	63	30	147	30
15 UNIVERSITY OF UTAH	1757	449	150	9	139	12	54	5	83	7	1169	371	40	5	122	40
16 N C STATE UNIV AT RALEIGH	1725	155	314	16	92	9	34	1	152	19	939	81	21	4	173	25
17 MICHIGAN STATE UNIVERSITY	1694	257	124	1	194	16	38	1	129	10	818	157	109	30	282	42
18 UNIVERSITY OF IOWA	1663	335	68	0	95	4	13	0	94	10	1182	288	33	8	178	25
19 UNIVERSITY OF KENTUCKY	1646	253	142	4	117	19	52	6	108	23	955	164	53	13	219	24
20 UNIV OF TEXAS AT AUSTIN	1624	263	242	11	378	28	184	30	212	34	211	63	109	26	288	71
TOTAL, 1ST 20 INSTS.	41165	7792	5089	223	3379	258	1436	168	2838	382	21999	5444	1522	395	4902	922
21 UNIV OF CAL DAVIS	1554	281	75	4	64	6	16	0	46	6	1231	233	22	4	100	28
22 RUTGERS THE ST UNIV OF NJ	1522	313	120	8	175	25	63	6	212	28	408	81	128	39	416	126
23 UNIV OF CAL BERKELEY	1488	275	317	29	186	15	86	13	84	7	557	138	59	22	199	51
24 UNIVERSITY OF ARIZONA	1468	215	156	3	191	9	104	5	116	11	637	135	83	23	181	29
25 UNIV OF CAL SAN FRANCISCO	1449	537	0	0	0	0	0	0	0	0	1449	537	0	0	0	0
26 UNIVERSITY OF COLORADO	1416	212	145	5	196	21	79	14	86	9	684	118	92	26	134	19
27 IOWA ST U OF SCI & TECH	1358	190	363	36	82	8	16	0	150	19	576	100	24	4	147	23
28 UNIV OF CAL SAN DIEGO	1329	290	25	2	163	20	251	39	74	4	722	206	22	6	72	13
29 UNIVERSITY OF CONNECTICUT	1307	313	138	13	61	4	31	3	52	7	697	187	118	34	210	65
30 UNIVERSITY OF KANSAS	1287	260	124	2	81	6	67	9	59	5	614	161	168	36	174	41
TOTAL, 1ST 30 INSTS.	55343	10678	6552	325	4578	372	2149	257	3717	478	29574	7340	2238	589	6535	1317
31 UNIV OF MD COLLEGE PARK	1276	220	193	9	342	46	30	4	153	24	336	89	44	10	178	38
32 UNIV OF MISSOURI COLUMBIA	1196	209	109	4	43	1	25	2	53	5	796	165	42	11	128	21
33 UNIV OF NC AT CHAPEL HILL	1194	187	38	0	78	7	21	1	56	3	816	134	41	10	144	32
34 UNIVERSITY OF GEORGIA	1144	107	29	1	77	3	53	5	87	12	662	50	69	8	167	28
35 NEW MEXICO STATE UNIV	1116	186	197	5	94	9	13	0	160	30	374	67	74	21	204	54
36 UNIVERSITY OF CINCINNATI	1115	185	135	15	62	1	15	2	68	15	740	138	28	5	67	9
37 UNIV ALABAMA BIRMINGHAM	1103	173	26	1	29	0	4	0	31	4	938	156	43	7	32	5
38 TEMPLE UNIVERSITY	1103	221	29	2	44	2	16	2	92	13	666	130	97	29	159	43
39 SUNY AT STONY BROOK	1094	240	63	3	192	17	56	3	83	12	538	165	51	14	111	26
40 GEORGIA INSTITUTE OF TECH	1094	60	667	23	176	7	30	0	118	16	25	2	17	3	61	9
TOTAL, 1ST 40 INSTS.	66778	12466	8038	388	5715	465	2412	276	4618	612	35465	8436	2744	707	7786	1582
41 VA POLYTECH INST & ST U	1086	72	316	10	82	0	34	2	112	20	419	24	23	4	100	12
42 OREGON STATE UNIVERSITY	1057	119	127	0	77	5	155	9	73	6	512	81	9	2	104	16
43 WEST VIRGINIA UNIVERSITY	1057	186	112	3	36	1	15	0	50	9	358	59	23	4	463	110
44 KANS ST U - AG & APP SCI	1054	140	154	13	57	2	10	0	63	4	606	94	17	1	147	26
45 WAYNE STATE UNIVERSITY	1050	300	64	22	79	19	7	1	82	23	654	195	36	6	128	34
46 UNIVERSITY OF VIRGINIA	1042	167	124	4	115	6	38	0	86	12	559	125	34	8	86	12
47 AUBURN UNIVERSITY	1041	114	213	5	71	5	9	1	101	20	462	50	36	10	149	23
48 UNIV OF HAWAII-MANOA	1023	212	60	2	89	5	101	11	52	3	514	161	31	6	176	24
49 COLORADO STATE UNIVERSITY	1011	120	162	9	58	3	65	6	85	3	470	71	45	14	126	14
50 UNIV OF SOUTH CAROLINA	992	257	65	1	93	15	36	3	170	33	353	155	68	14	207	36
TOTAL, 1ST 50 INSTS.	77191	14153	9435	457	6472	526	2882	309	5492	745	40372	9451	3066	776	9472	1889
TOTAL, ALL OTHER INSTS.	113353	22891	11724	312	12195	1170	4117	325	16678	3285	39687	11775	8695	2294	20257	3730

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-54. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	55917	15424	6302	344	4224	905	1119	231	11486	3270	19843	6502	4093	1683	8850	2489
1 OHIO STATE UNIVERSITY	2971	608	66	7	54	11	10	0	87	16	2446	431	27	9	281	134
2 CMTY COL ALLEGHENY COUNTY	1210	356	127	1	191	49	0	0	331	99	213	77	181	79	167	51
3 UNIV OF CAL LOS ANGELES	809	319	67	7	57	9	21	2	5	1	567	256	25	14	67	30
4 UNIV OF CAL BERKELEY	742	219	141	20	179	36	22	3	26	4	263	96	32	23	79	37
5 UNIV OF CAL SAN FRANCISCO	720	257	0	0	0	0	0	0	0	0	720	257	0	0	0	0
6 INDIANA UNIVERSITY	699	224	49	6	41	8	16	4	130	40	321	125	54	18	88	23
7 UNIV OF WIS-MADISON	678	282	60	20	32	12	34	9	34	9	368	171	31	18	119	43
8 UNIVERSITY OF WASHINGTON	580	201	41	6	32	3	22	5	18	4	395	166	13	3	59	14
9 LOUISIANA STATE UNIV	529	140	14	0	15	6	9	7	17	7	457	113	4	2	13	5
10 UNIVERSITY OF MICHIGAN	501	146	73	10	14	6	5	1	2	2	340	85	31	20	36	22
TOTAL, 1ST 10 INSTS.	9439	2752	638	77	615	140	139	31	650	182	6090	1777	398	186	909	359
11 UNIVERSITY OF MINNESOTA	467	123	51	4	7	3	0	0	25	2	324	84	10	6	50	24
12 UNIV OF MD BALT PROF SCH	454	109	0	0	0	0	0	0	0	0	433	101	0	0	21	8
13 UNIV OF CAL DAVIS	451	167	39	3	20	6	1	1	3	1	366	146	2	1	20	9
14 WASHINGTON STATE UNIV	436	38	82	2	13	2	5	0	31	3	245	22	6	0	54	9
15 CUYAHOGA CMTY COL DIST	435	110	63	0	40	8	1	0	142	39	39	14	53	23	97	26
16 ST LOUIS COMMUNITY COL	384	105	67	2	33	10	3	0	135	27	82	47	20	6	44	13
17 PURDUE UNIVERSITY	381	101	101	1	28	5	3	1	98	36	80	46	20	7	51	5
18 CALIF ST UNIV LONG BEACH	375	118	90	7	45	11	10	3	49	18	77	52	23	8	81	19
19 SUNY NASSAU CMTY COLLEGE	360	47	20	0	53	5	0	0	175	22	37	9	24	8	51	3
20 NORTHERN VA COMMUNITY COL	357	68	79	2	25	7	5	2	150	12	54	28	20	11	24	6
TOTAL, 1ST 20 INSTS.	13539	3738	1230	98	879	197	167	38	1458	342	7827	2326	576	256	1402	481
21 SINCLAIR COMMUNITY COL	344	100	67	4	16	2	4	1	94	22	67	53	26	11	70	7
22 UNIVERSITY OF IOWA	333	115	9	1	5	1	1	1	4	1	276	99	9	1	29	11
23 UNIVERSITY OF PITTSBURGH	330	82	22	4	10	1	5	0	74	24	180	40	9	3	30	10
24 MONTGOMERY COLLEGE	328	79	21	0	35	5	1	0	66	19	25	9	40	17	140	29
25 WAYNE STATE UNIVERSITY	323	98	38	11	25	7	1	1	34	11	138	42	30	9	57	17
26 SUNY AT BUFFALO	321	44	20	3	7	0	0	0	0	0	282	38	3	1	9	2
27 UNIV OF CAL SAN DIEGO	313	103	6	0	28	3	33	13	15	2	200	77	15	3	16	5
28 UNIVERSITY OF NEW MEXICO	311	94	68	6	36	6	16	3	28	12	133	57	8	2	22	8
29 U TEX HLTH SCI CTR DALLAS	297	82	0	0	0	0	0	0	3	1	286	79	8	2	0	0
30 UNIV OF HAWAII-MANOA	293	86	10	0	7	3	7	1	15	1	195	56	6	2	53	23
TOTAL, 1ST 30 INSTS.	16732	4621	1491	127	1048	225	235	58	1791	435	9609	2876	730	307	1828	593
31 SAN JOSE STATE UNIVERSITY	286	52	97	2	28	7	18	0	55	14	15	6	9	4	64	19
32 UNIV OF ILL URBANA	272	124	31	7	22	9	28	9	15	6	129	67	25	14	22	12
33 HILLSBOROUGH CMTY COLLEGE	272	83	7	0	15	3	0	0	49	22	49	30	38	18	114	10
34 SAN DIEGO CITY COLLEGE	271	86	30	10	22	2	8	1	72	7	57	39	40	19	42	8
35 CALIF ST UNIV FULLERTON	269	93	49	1	29	6	9	4	58	11	36	19	51	37	37	15
36 T.[illegible] OREG HLTH SCI UNIV	268	91	0	0	0	0	0	0	0	0	264	91	4	0	0	0
37 UNIV OF ILL MED CTR CHGO	266	72	0	0	0	0	0	0	0	0	265	72	1	0	0	0
38 UNIVERSITY OF CONNECTICUT	264	101	34	5	11	1	4	1	18	4	136	58	18	11	43	21
39 SAN FRANCISCO STATE UNIV	260	96	22	3	56	18	3	1	41	12	46	28	20	13	72	21
40 PENNSYLVANIA STATE UNIV	251	102	32	4	38	11	1	1	87	38	60	33	8	3	25	12
TOTAL, 1ST 40 INSTS.	19411	5521	1793	159	1269	282	306	75	2186	549	10666	3319	944	426	2247	711
41 U TEX HLTH SCI CTR S ANTO	244	56	0	0	0	0	0	0	1	1	234	53	7	1	2	1
42 UNIV OF WIS-MILWAUKEE	241	56	52	5	29	2	27	3	9	3	20	10	22	7	82	26
43 COL OF MED & DENT OF N J	233	24	1	0	0	0	0	0	0	0	218	20	14	4	0	0
44 UNIVERSITY OF UTAH	232	54	44	1	20	1	8	2	13	3	105	37	9	2	33	8
45 UNIV OF TEXAS AT AUSTIN	230	76	52	10	38	10	6	0	13	2	46	25	29	13	46	16
46 UNIV OF MD COLLEGE PARK	227	63	77	5	44	10	3	1	34	14	27	16	1	1	41	16
47 TEMPLE UNIVERSITY	227	43	30	1	0	0	1	0	20	7	118	21	8	4	50	10
48 MIAMI-DADE CMTY COLLEGE	219	54	21	2	15	4	4	1	92	29	54	9	18	8	15	1
49 UNIVERSITY OF CINCINNATI	218	29	77	7	6	0	0	0	14	4	105	16	10	2	6	0
50 COLUMBUS TECHNICAL INST	215	65	15	7	8	1	1	0	24	4	29	16	6	2	132	35
TOTAL, 1ST 50 INSTS.	21697	6041	2162	197	1429	310	356	82	2406	616	11622	3542	1068	470	2654	824
TOTAL, ALL OTHER INSTS.	34220	9383	4140	147	2795	595	763	149	9080	2654	8221	2960	3025	1213	6196	1665

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-95. -- FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	82411	16036	7657	244	9709	988	1689	187	7723	1273	33809	9671	5027	1381	11797	2292
1 HARVARD UNIVERSITY	4457	875	40	0	235	17	50	6	56	8	3895	809	43	15	138	20
2 JOHNS HOPKINS UNIVERSITY	3329	504	963	13	410	25	33	4	213	41	1520	370	33	5	157	46
3 CORNELL UNIVERSITY	2451	432	340	15	234	21	32	3	75	14	1388	278	110	39	272	62
4 MASS INST OF TECHNOLOGY	2200	352	756	63	509	39	96	17	165	11	409	161	55	24	210	37
5 COLUMBIA UNIV MAIN DIV	1770	396	113	6	119	10	191	44	47	4	1059	289	16	5	225	38
6 YALE UNIVERSITY	1746	441	41	0	128	7	22	1	59	6	1329	394	38	20	129	13
7 UNIV OF PENNSYLVANIA	1569	265	86	6	91	7	6	0	83	8	1032	200	27	7	244	37
8 WASHINGTON UNIVERSITY	1567	352	57	1	72	5	0	0	86	12	1251	322	30	6	71	6
9 DUKE UNIVERSITY	1502	245	46	0	47	1	18	1	40	3	1203	210	24	3	124	27
10 NEW YORK UNIVERSITY	1405	271	26	0	72	7	0	0	155	10	903	190	70	24	179	40
TOTAL, 1ST 10 INSTS.	21996	4133	2468	104	1917	139	448	76	979	117	13989	3223	446	148	1749	326
11 CASE WESTERN RESERVE UNIV	1367	280	121	3	80	1	7	0	46	5	1070	261	13	3	30	7
12 UNIV OF SOUTHERN CAL	1296	199	130	2	87	7	15	0	39	1	892	168	39	6	94	15
13 UNIVERSITY OF CHICAGO	1255	229	48	1	164	13	45	2	59	1	771	191	40	7	128	14
14 NORTHWESTERN UNIVERSITY	1252	212	160	6	145	15	16	2	105	10	624	148	50	13	152	18
15 CUNY MT SINAI SCH OF MED	1213	293	27	0	28	2	4	1	19	2	1110	283	4	1	21	4
16 UNIVERSITY OF ROCHESTER	1189	216	46	1	169	9	8	1	57	6	799	184	43	9	67	6
17 UNIVERSITY OF MIAMI	1165	227	69	1	35	0	101	5	49	5	832	208	36	5	43	3
18 STANFORD UNIVERSITY	1092	117	277	11	140	6	36	4	92	4	422	68	25	8	100	16
19 HOWARD UNIVERSITY	1017	247	58	0	42	7	6	1	32	4	790	210	20	4	69	21
20 VANDERBILT UNIVERSITY	889	130	56	3	63	5	8	0	49	5	574	93	74	20	65	4
TOTAL, 1ST 20 INSTS.	33731	6283	3460	132	2870	204	694	92	1526	160	21873	5037	790	224	2518	434
21 BOSTON UNIVERSITY	885	233	42	6	77	7	5	0	49	7	555	166	36	15	121	32
22 YESHIVA UNIVERSITY	866	197	5	0	60	12	0	0	8	1	690	151	49	19	54	14
23 GEORGETOWN UNIVERSITY	849	229	0	0	29	1	0	0	13	0	711	209	12	2	84	17
24 EMORY UNIVERSITY	820	135	91	5	82	4	15	1	48	3	455	97	36	11	93	14
25 BAYLOR COL OF MEDICINE	792	152	0	0	0	0	0	0	0	0	792	152	0	0	0	0
26 NORTHEASTERN UNIVERSITY	690	197	156	6	99	14	11	0	60	14	229	128	33	8	102	27
27 GEORGE WASHINGTON UNIV	639	142	62	1	35	3	6	1	61	11	356	99	25	8	94	19
28 NEW YORK MEDICAL COLLEGE	630	165	0	0	0	0	0	0	0	0	630	165	0	0	0	0
29 BRIGHAM YOUNG UNIVERSITY	576	68	85	1	61	1	21	1	134	11	138	37	41	7	96	10
30 CARNEGIE-MELLON UNIV	555	84	177	10	148	21	0	0	88	7	80	32	32	10	30	4
TOTAL, 1ST 30 INSTS.	41033	7885	4078	161	3461	267	752	95	1987	214	26509	6273	1054	304	3192	571
31 TULANE UNIVERSITY	526	59	37	1	21	0	8	2	42	3	322	40	23	3	73	10
32 CALIFORNIA INST OF TECH	526	52	134	0	221	18	55	11	28	2	71	20	0	0	17	1
33 PRINCETON UNIVERSITY	501	64	93	4	133	10	41	4	47	2	52	18	26	4	109	22
34 SYRACUSE UNIVERSITY	496	56	87	1	64	5	10	1	132	15	36	7	58	10	109	17
35 ST LOUIS UNIVERSITY	489	87	10	0	22	1	16	0	16	2	371	72	18	4	36	8
36 WAKE FOREST UNIVERSITY	489	58	2	0	21	1	0	0	20	3	386	38	23	8	37	8
37 LOMA LINDA UNIVERSITY	450	99	50	0	46	11	9	0	26	7	250	73	19	3	50	5
38 ROCKEFELLER UNIVERSITY	435	91	0	0	38	2	0	0	8	0	332	76	57	13	0	0
39 LOYOLA UNIV - CHICAGO	427	65	0	0	29	1	0	0	21	2	285	47	36	4	56	11
40 RENSSELAER POLYTECH INST	405	20	219	4	74	3	9	0	65	6	14	3	8	2	16	2
TOTAL, 1ST 40 INSTS.	45777	8536	4710	171	4130	319	900	113	2392	256	28628	6667	1322	355	3695	655
41 UNIVERSITY OF NOTRE DAME	372	31	77	1	112	11	5	1	34	1	62	8	18	2	64	7
42 BROWN UNIVERSITY	371	42	54	1	60	4	24	3	62	2	80	17	19	4	72	11
43 DARTMOUTH COLLEGE	356	52	25	1	35	1	10	0	26	1	188	35	23	4	49	10
44 TUFTS UNIVERSITY	350	57	40	3	34	2	3	0	16	0	197	36	18	5	42	11
45 THOMAS JEFFERSON UNIV	322	53	7	0	4	0	0	0	1	0	282	42	28	11	0	0
46 UNIVERSITY OF DAYTON	319	19	125	0	84	4	5	1	34	1	20	7	22	3	29	3
47 RICE UNIVERSITY	319	38	75	6	78	6	19	0	41	6	48	14	10	2	48	4
48 UNIVERSITY OF DENVER	317	67	30	0	46	1	12	3	52	7	31	13	35	13	111	30
49 HAHNEMANN MED COL & HOSP	313	39	2	0	9	0	0	0	1	0	276	31	22	7	3	1
50 LONG ISLAND UNIVERSITY	308	54	0	0	48	2	16	4	45	8	90	14	35	10	74	16
TOTAL, 1ST 50 INSTS.	49124	8988	5145	183	4640	350	994	125	2704	282	29902	6884	1552	416	4187	748
TOTAL, ALL OTHER INSTS.	33287	7048	2512	61	5069	638	695	62	5019	991	8907	2787	3475	965	7610	1544

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-56. -- PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	29952	7028	2578	105	2060	463	337	75	4260	1026	12813	3003	2814	1068	5090	1288
1 HARVARD UNIVERSITY	2258	404	10	1	20	3	1	0	7	3	2172	387	8	3	40	7
2 HOWARD UNIVERSITY	936	94	23	2	4	0	0	0	6	0	890	90	0	0	13	2
3 UNIV OF PENNSYLVANIA	816	217	160	28	153	21	3	2	53	6	299	99	36	19	112	42
4 NORTHEASTERN UNIVERSITY	809	173	126	4	120	18	11	0	221	27	128	63	60	15	143	46
5 NEW YORK UNIVERSITY	690	152	4	0	9	3	3	2	36	10	440	70	77	33	121	34
6 GEORGE WASHINGTON UNIV	601	131	129	2	26	5	12	0	71	7	256	70	45	30	62	17
7 PHILA COL OSTEOPATHIC MED	597	10	0	0	0	0	0	0	0	0	597	10	0	0	0	0
8 BOSTON UNIVERSITY	487	146	54	4	18	3	8	2	96	12	164	65	23	5	124	55
9 COLUMBIA UNIV MAIN DIV	464	114	34	0	9	0	4	2	13	0	293	85	2	1	109	26
10 TUFTS UNIVERSITY	461	72	14	1	3	1	0	0	9	3	416	61	4	3	15	3
TOTAL, 1ST 10 INSTS.	8119	1513	554	42	362	54	42	8	512	68	5655	1000	255	109	739	232
11 INTER AM U PR-SAN GERMAN	439	147	8	0	37	8	2	0	84	16	101	48	54	21	153	54
12 FAIRLEIGH DICKINSON UNIV	391	46	49	2	29	7	3	0	48	11	203	18	25	7	34	1
13 INTER AM U PR-CTRL OFF	382	131	9	0	35	7	6	0	76	15	141	78	50	23	65	8
14 UNIV OF SOUTHERN CAL	356	80	21	0	11	2	0	0	5	0	270	64	12	0	37	14
15 CHAPMAN COLLEGE	298	44	24	0	15	2	7	1	87	7	43	11	76	16	46	7
16 STANFORD UNIVERSITY	290	45	126	3	30	2	13	1	44	10	39	15	11	6	27	8
17 CUNY MT SINAI SCH OF MED	290	44	3	0	1	0	0	0	0	0	286	44	0	0	0	0
18 LOYOLA UNIV - CHICAGO	278	55	0	0	9	2	0	0	23	3	196	34	25	11	25	5
19 CASE WESTERN RESERVE UNIV	272	43	0	0	1	0	0	0	0	0	255	36	7	4	9	3
20 FLORIDA INST OF TECH	271	19	17	0	6	0	2	0	61	8	0	0	15	5	170	6
TOTAL, 1ST 20 INSTS.	11386	2167	811	47	536	84	75	10	940	138	7189	1348	530	202	1305	338
21 MERCY COLLEGE	269	105	0	0	4	0	2	0	77	32	27	17	74	43	85	13
22 YESHIVA UNIVERSITY	256	51	0	0	1	0	0	0	4	1	188	28	39	15	24	7
23 MASS INST OF TECHNOLOGY	256	70	77	14	26	4	11	6	23	3	56	27	23	9	40	7
24 DARTMOUTH COLLEGE	252	42	7	0	8	2	1	0	4	0	214	36	8	2	10	2
25 PACE UNIVERSITY	252	69	0	0	25	4	2	1	125	29	24	10	40	11	36	14
26 NEW YORK INST TECHNOLOGY	243	36	46	2	28	0	0	0	63	18	84	10	10	1	12	5
27 NORTHWESTERN UNIVERSITY	241	33	12	0	1	1	2	0	7	0	183	26	9	2	27	4
28 NEW YORK MEDICAL COLLEGE	234	51	0	0	0	0	0	0	0	0	234	51	0	0	0	0
29 MARQUETTE UNIVERSITY	224	49	4	0	4	3	0	0	15	7	189	35	3	2	9	2
30 LONG ISLAND UNIVERSITY	221	30	0	0	14	1	7	4	26	1	53	6	13	3	108	15
TOTAL, 1ST 30 INSTS.	13834	2703	957	63	647	99	100	21	1284	229	8441	1594	749	290	1656	407
31 UNIV OF HEALTH SCIENCES	215	21	0	0	0	0	0	0	0	0	215	21	0	0	0	0
32 ROCHESTER INST TECHNOLOGY	214	11	85	1	32	2	0	0	86	7	2	1	2	0	7	0
33 LAWRENCE INST OF TECH	209	66	4	0	18	5	5	1	33	11	33	13	41	16	75	20
34 WILLIAM RAINEY HARPER COL	192	67	46	0	22	6	0	0	46	21	45	27	10	4	23	9
35 JOHNS HOPKINS UNIVERSITY	192	41	10	0	4	1	5	2	0	0	86	28	4	3	83	7
36 LOMA LINDA UNIVERSITY	192	32	19	0	9	1	2	0	12	2	112	19	12	5	26	5
37 CORNELL UNIVERSITY	174	72	12	1	15	7	2	1	10	8	92	29	11	9	32	17
38 YALE UNIVERSITY	171	98	3	0	4	2	2	0	2	1	129	83	15	9	16	3
39 AMERICAN UNIVERSITY	169	42	0	0	4	0	0	0	56	13	13	10	6	1	90	18
40 VANDERBILT UNIVERSITY	164	22	5	1	2	2	2	1	2	1	140	12	6	1	7	4
TOTAL, 1ST 40 INSTS.	15726	3175	1141	66	757	125	118	26	1531	293	9308	1837	856	338	2015	490
41 JOHN F KENNEDY UNIVERSITY	163	69	0	0	11	5	0	0	1	0	28	10	80	43	43	11
42 EMORY UNIVERSITY	157	22	14	0	9	1	1	0	10	1	91	14	11	3	21	3
43 WASHINGTON UNIVERSITY	146	41	25	0	5	4	0	0	5	1	92	29	5	4	14	3
44 UNIVERSITY OF NEW HAVEN	145	25	30	1	24	5	0	0	32	6	9	3	10	3	40	7
45 UNIVERSITY OF DETROIT	143	15	8	0	1	0	0	0	5	1	119	12	9	2	1	0
46 POLYTECHNIC INST OF N Y	-	-	107	4	8	1	0	0	12	2	0	0	0	0	8	2
47 BRIDGEPORT ENG INSTITUTE	127	7	86	1	13	0	0	0	17	4	0	0	0	0	11	2
48 BAYLOR COL OF MEDICINE	126	30	0	0	0	0	0	0	0	0	126	30	0	0	0	0
49 UNIVERSITY OF HARTFORD	123	18	24	0	14	6	7	0	45	5	4	2	10	0	19	5
50 SYRACUSE UNIVERSITY	122	15	54	2	0	0	0	0	39	5	5	3	18	3	6	2
TOTAL, 1ST 50 INSTS.	17113	3426	1489	74	842	147	126	26	1697	318	9782	1940	999	396	2178	525
TOTAL, ALL OTHER INSTS.	12839	3602	1089	31	1218	316	211	49	2563	708	3031	1063	1815	672	2912	763

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-57. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	191731	35507	21849	843	16986	1396	6313	611	14586	2065	100756	24152	8230	2080	23011	4360
1 HARVARD UNIVERSITY	4457	875	40	0	235	17	50	6	56	8	3895	809	43	15	138	20
2 JOHNS HOPKINS UNIVERSITY	3329	504	963	13	410	25	33	4	213	41	1520	370	33	5	157	46
3 UNIV OF WIS-MADISON	3117	744	309	26	197	8	201	29	199	21	1737	516	166	58	308	86
4 UNIVERSITY OF MINNESOTA	2862	490	193	3	162	9	30	3	163	21	1717	324	109	25	488	105
5 LOUISIANA STATE UNIV	2627	669	155	2	133	2	103	20	156	32	1897	579	37	8	146	26
6 CORNELL UNIVERSITY	2451	432	340	15	234	21	32	3	75	14	1388	278	110	39	272	62
7 UNIVERSITY OF FLORIDA	2359	431	221	4	97	1	21	1	75	5	1658	372	47	9	240	39
8 TEXAS A & M UNIVERSITY	2300	147	412	9	103	2	84	4	137	9	1075	57	48	9	441	57
9 MASS INST OF TECHNOLOGY	2200	352	756	63	509	39	96	17	165	11	409	161	55	24	210	37
10 UNIV OF CAL LOS ANGELES	2189	657	174	14	148	27	84	12	66	5	1448	531	71	19	198	49
TOTAL, 1ST 10 INSTS.	27891	5301	3563	149	2228	151	734	99	1305	167	16744	3997	719	211	2598	527
11 UNIV OF ILL URBANA	2140	343	377	16	260	26	116	18	232	42	729	154	133	35	293	52
12 UNIVERSITY OF MICHIGAN	2121	431	334	29	206	17	53	2	102	7	1042	270	105	33	279	73
13 PENNSYLVANIA STATE UNIV	2085	227	622	19	196	11	89	5	188	38	713	112	74	15	203	27
14 PURDUE UNIVERSITY	2027	286	533	21	253	24	26	1	223	40	701	156	91	22	200	22
15 UNIVERSITY OF WASHINGTON	1828	374	263	15	134	9	145	24	77	4	993	273	46	14	170	35
16 INDIANA UNIVERSITY	1815	430	45	3	201	13	55	2	172	20	936	316	121	24	285	52
17 OHIO STATE UNIVERSITY	1806	331	250	13	116	10	38	4	148	16	966	238	46	8	242	42
18 UNIVERSITY OF PITTSBURGH	1780	520	161	8	158	11	16	0	122	19	1113	422	63	30	147	30
19 COLUMBIA UNIV MAIN DIV	1770	396	113	6	119	10	191	44	47	4	1059	289	16	5	225	38
20 UNIVERSITY OF UTAH	1757	449	150	9	139	12	54	5	83	7	1169	371	40	5	122	40
TOTAL, 1ST 20 INSTS.	47020	9088	6411	288	4010	294	1517	204	2699	364	26165	6598	1454	402	4764	938
21 YALE UNIVERSITY	1746	441	41	0	128	7	22	1	59	6	1329	394	38	20	129	13
22 N C STATE UNIV AT RALEIGH	1725	155	314	16	92	9	34	1	152	19	939	81	21	4	173	25
23 MICHIGAN STATE UNIVERSITY	1694	257	124	1	194	16	38	1	129	10	818	157	109	30	282	42
24 UNIVERSITY OF IOWA	1663	335	68	0	95	4	13	0	94	10	1182	288	33	8	178	25
25 UNIVERSITY OF KENTUCKY	1646	253	142	4	117	19	52	6	108	23	955	164	53	13	219	24
26 UNIV OF TEXAS AT AUSTIN	1624	263	242	11	378	28	184	30	212	34	211	63	109	26	288	71
27 UNIV OF PENNSYLVANIA	1569	265	86	6	91	7	6	0	83	8	1032	200	27	7	244	37
28 WASHINGTON UNIVERSITY	1567	352	57	1	72	5	0	0	86	12	1251	322	30	6	71	6
29 UNIV OF CAL DAVIS	1554	281	75	4	64	6	16	0	46	6	1231	233	22	4	100	28
30 RUTGERS THE ST UNIV OF NJ	1522	313	120	8	175	25	63	6	212	28	408	81	128	39	416	126
TOTAL, 1ST 30 INSTS.	63330	12003	7680	339	5416	420	1945	249	3880	520	35521	8581	2024	559	6864	1335
31 DUKE UNIVERSITY	1502	245	46	0	47	1	18	1	40	3	1203	210	24	3	124	27
32 UNIV OF CAL BERKELEY	1488	275	317	29	186	15	86	13	84	7	557	138	59	22	199	51
33 UNIVERSITY OF ARIZONA	1468	215	156	3	191	9	104	5	116	11	637	135	83	23	181	29
34 UNIV OF CAL SAN FRANCISCO	1449	537	0	0	0	0	0	0	0	0	1449	537	0	0	0	0
35 UNIVERSITY OF COLORADO	1416	212	145	5	196	21	79	14	86	9	684	118	92	26	134	19
36 NEW YORK UNIVERSITY	1405	271	26	0	72	7	0	0	155	10	903	190	70	24	179	40
37 CASE WESTERN RESERVE UNIV	1367	280	121	3	80	1	7	0	46	5	1070	261	13	3	30	7
38 IOWA ST U OF SCI & TECH	1358	190	363	36	82	8	16	0	150	19	576	100	24	4	147	23
39 UNIV OF CAL SAN DIEGO	1329	290	25	2	163	20	251	39	74	4	722	206	22	6	72	13
40 UNIVERSITY OF CONNECTICUT	1307	313	138	13	61	4	31	3	52	7	697	187	118	34	210	65
TOTAL, 1ST 40 INSTS.	77419	14831	9017	430	6494	506	2537	324	4683	595	44019	10663	2529	704	8140	1609
41 UNIV OF SOUTHERN CAL	1296	199	130	2	87	7	15	0	39	1	892	168	39	6	94	15
42 UNIVERSITY OF KANSAS	1287	260	124	2	81	6	67	9	59	5	614	161	168	36	174	41
43 UNIV OF MD COLLEGE PARK	1276	220	193	9	342	46	30	4	153	24	336	89	44	10	178	38
44 UNIVERSITY OF CHICAGO	1255	229	48	1	164	13	45	2	59	1	771	191	40	7	128	14
45 NORTHWESTERN UNIVERSITY	1252	212	160	6	145	15	16	2	105	10	624	148	50	13	152	18
46 CUNY MT SINAI SCH OF MED	1213	293	27	0	28	2	4	1	19	2	1110	283	4	1	21	4
47 UNIV OF MISSOURI COLUMBIA	1196	209	109	4	43	1	25	2	53	5	796	165	42	11	128	21
48 UNIV OF NC AT CHAPEL HILL	1194	187	38	0	78	7	21	1	56	3	816	134	41	10	144	32
49 UNIVERSITY OF ROCHESTER	1189	216	46	1	169	9	8	1	57	6	799	184	43	9	67	6
50 UNIVERSITY OF MIAMI	1165	227	69	1	35	0	101	5	49	5	832	208	36	5	43	3
TOTAL, 1ST 50 INSTS.	89742	17083	9961	456	7666	612	2869	351	5332	657	51609	12394	3036	812	9269	1801
TOTAL, ALL OTHER INSTS.	101989	18424	11888	387	9320	784	3444	260	9254	1408	49147	11758	5194	1268	13742	2559

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-58. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD AND SEX: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	44829	11048	4318	316	2403	497	707	182	3826	970	26229	6626	2186	830	5160	1627
1 OHIO STATE UNIVERSITY	2971	608	66	7	54	11	10	0	87	16	2446	431	27	9	281	134
2 HARVARD UNIVERSITY	2258	404	10	1	20	3	1	0	7	3	2172	387	8	3	40	7
3 HOWARD UNIVERSITY	936	94	23	2	4	0	0	0	6	0	890	90	0	0	13	2
4 UNIV OF PENNSYLVANIA	816	217	160	28	153	21	3	2	53	6	299	99	36	19	112	42
5 UNIV OF CAL LOS ANGELES	809	319	67	7	57	9	21	2	5	1	567	256	25	14	67	30
6 NORTHEASTERN UNIVERSITY	809	173	126	4	120	18	11	0	221	27	128	63	60	15	143	46
7 UNIV OF CAL BERKELEY	742	219	141	20	179	36	22	3	26	4	263	96	32	23	79	37
8 UNIV OF CAL SAN FRANCISCO	720	257	0	0	0	0	0	0	0	0	720	257	0	0	0	0
9 INDIANA UNIVERSITY	699	224	49	6	41	8	16	4	130	40	321	125	54	18	88	23
10 NEW YORK UNIVERSITY	690	152	4	0	9	3	3	2	36	10	440	70	77	33	121	34
TOTAL, 1ST 10 INSTS.	11450	2667	646	75	637	109	87	13	571	107	8246	1874	319	134	944	355
11 UNIV OF WIS-MADISON	678	282	60	20	32	12	34	9	34	9	368	171	31	18	119	43
12 GEORGE WASHINGTON UNIV	601	131	129	2	26	5	12	0	71	7	256	70	45	30	62	17
13 PHILA COL OSTEOPATHIC MED	597	10	0	0	0	0	0	0	0	0	597	10	0	0	0	0
14 UNIVERSITY OF WASHINGTON	580	201	41	6	32	3	22	5	18	4	395	166	13	3	59	14
15 LOUISIANA STATE UNIV	529	140	14	0	15	6	9	7	17	7	457	113	4	2	13	5
16 UNIVERSITY OF MICHIGAN	501	146	73	10	14	6	5	1	2	2	340	85	31	20	36	22
17 BOSTON UNIVERSITY	487	146	54	4	18	3	8	2	96	12	164	65	23	5	124	55
18 UNIVERSITY OF MINNESOTA	467	123	51	4	7	3	0	0	25	2	324	84	10	6	50	24
19 COLUMBIA UNIV MAIN DIV	464	114	34	0	9	0	4	2	13	0	293	85	2	1	109	26
20 TUFTS UNIVERSITY	461	72	14	1	3	1	0	0	9	3	416	61	4	3	15	3
TOTAL, 1ST 20 INSTS.	16815	4032	1116	122	793	148	181	39	856	153	11856	2784	482	222	1531	564
21 UNIV OF MD BALT PROF SCH	454	109	0	0	0	0	0	0	0	0	433	101	0	0	21	8
22 UNIV OF CAL DAVIS	451	167	39	3	20	6	1	1	3	1	366	146	2	1	20	9
23 WASHINGTON STATE UNIV	436	38	82	2	13	2	5	0	31	3	245	22	6	0	54	9
24 FAIRLEIGH DICKINSON UNIV	391	46	49	2	29	7	3	0	48	11	203	18	25	7	34	1
25 PURDUE UNIVERSITY	381	101	101	1	28	5	3	1	98	36	80	46	20	7	51	5
26 UNIV OF SOUTHERN CAL	356	80	21	0	11	2	0	0	5	0	270	64	12	0	37	14
27 UNIVERSITY OF IOWA	333	115	9	1	5	1	1	1	4	1	276	99	9	1	29	11
28 UNIVERSITY OF PITTSBURGH	330	82	22	4	10	1	5	0	74	24	180	40	9	3	30	10
29 WAYNE STATE UNIVERSITY	323	98	38	11	25	7	1	1	34	11	138	42	30	9	57	17
30 SUNY AT BUFFALO	321	44	20	3	7	0	0	0	0	0	282	38	3	1	9	2
TOTAL, 1ST 30 INSTS.	20591	4912	1497	149	941	179	200	43	1153	240	14329	3400	598	251	1873	650
31 UNIV OF CAL SAN DIEGO	313	103	6	0	28	3	33	13	15	2	200	77	15	3	16	5
32 UNIVERSITY OF NEW MEXICO	311	94	68	6	36	6	16	3	28	12	133	57	8	2	22	8
33 U TEX HLTH SCI CTR DALLAS	297	82	0	0	0	0	0	0	3	1	286	79	8	2	0	0
34 UNIV OF HAWAII-MANOA	293	86	10	0	7	3	7	1	15	1	195	56	6	2	53	23
35 STANFORD UNIVERSITY	290	45	126	3	30	2	13	1	44	10	39	15	11	6	27	8
36 CUNY MT SINAI SCH OF MED	290	44	3	0	1	0	0	0	0	0	286	44	0	0	0	0
37 LOYOLA UNIV - CHICAGO	278	55	0	0	9	2	0	0	23	3	196	34	25	11	25	5
38 UNIV OF ILL URBANA	272	124	31	7	22	9	28	9	15	6	129	67	25	14	22	12
39 CASE WESTERN RESERVE UNIV	272	43	0	0	1	0	0	0	0	0	255	36	7	4	9	3
40 FLORIDA INST OF TECH	271	19	17	0	6	0	2	0	61	8	0	0	15	5	170	6
TOTAL, 1ST 40 INSTS.	23478	5607	1758	165	1081	204	299	70	1357	283	16048	3865	718	300	2217	720
41 THE OREG HLTH SCI UNIV	268	91	0	0	0	0	0	0	0	0	264	91	4	0	0	0
42 UNIV OF ILL MED CTR CHGO	266	72	0	0	0	0	0	0	0	0	265	72	1	0	0	0
43 UNIVERSITY OF CONNECTICUT	264	101	34	5	11	1	4	1	18	4	136	58	18	11	43	21
44 MASS INST OF TECHNOLOGY	256	70	77	14	26	4	11	6	23	3	56	27	23	9	40	7
45 YESHIVA UNIVERSITY	256	51	0	0	1	0	0	0	4	1	188	28	39	15	24	7
46 DARTMOUTH COLLEGE	252	42	7	0	8	2	1	0	4	0	214	36	8	2	10	2
47 PACE UNIVERSITY	252	69	0	0	25	4	2	1	125	29	24	10	40	11	36	14
48 PENNSYLVANIA STATE UNIV	251	102	32	4	38	11	1	1	87	38	60	33	8	3	25	12
49 U TEX HLTH SCI CTR S ANTO	244	56	0	0	0	0	0	0	1	1	234	53	7	1	2	1
50 NEW YORK INST TECHNOLOGY	243	36	46	2	28	0	0	0	63	18	84	10	10	1	12	5
TOTAL, 1ST 50 INSTS.	26030	6297	1954	190	1218	226	318	79	1682	377	17573	4283	876	353	2409	789
TOTAL, ALL OTHER INSTS.	18799	4751	2364	126	1185	271	389	103	2144	593	8656	2343	1310	477	2751	838

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-59. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION, CONTROL, AND STATUS: JANUARY 1983

DIVISION AND STATE	PUBLIC			PRIVATE		
	TOTAL	FULL TIME	PART TIME	TOTAL	FULL TIME	PART TIME
TOTAL, ALL INSTITUTIONS	246,461	190,544	55,917	112,363	82,411	29,952
NEW ENGLAND	9,056	7,595	1,461	21,675	15,265	6,410
CONNECTICUT	2,743	2,162	581	3,579	2,612	967
MAINE	820	621	199	275	233	42
MASSACHUSETTS	3,525	2,990	535	16,139	11,148	4,991
NEW HAMPSHIRE	478	461	17	798	494	304
RHODE ISLAND	717	676	41	641	560	81
VERMONT	773	685	88	243	218	25
MIDDLE ATLANTIC	32,715	23,251	9,464	31,971	23,086	8,885
NEW JERSEY	6,079	4,375	1,704	2,331	1,457	874
NEW YORK	16,539	11,365	5,174	20,538	15,277	5,261
PENNSYLVANIA	10,097	7,511	2,586	9,102	6,352	2,750
EAST NORTH CENTRAL	44,991	32,827	12,164	15,223	11,305	3,918
ILLINOIS	10,065	7,639	2,426	6,883	5,211	1,672
INDIANA	5,420	4,321	1,099	1,507	1,232	275
MICHIGAN	9,943	7,878	2,065	1,501	933	568
OHIO	12,121	6,787	5,334	3,938	2,979	959
WISCONSIN	7,442	6,202	1,240	1,394	950	444
WEST NORTH CENTRAL	20,053	17,071	2,982	6,131	4,832	1,299
IOWA	4,091	3,530	561	910	709	201
KANSAS	3,734	3,228	506	303	242	61
MINNESOTA	4,482	3,797	685	845	642	203
MISSOURI	4,171	3,300	871	3,319	2,667	652
NEBRASKA	1,584	1,420	164	564	437	127
NORTH DAKOTA	1,096	1,002	94	32	20	12
SOUTH DAKOTA	895	794	101	158	115	43
SOUTH ATLANTIC	37,940	30,753	7,187	17,666	13,817	3,849
DELAWARE	780	761	19	29	14	15
DISTRICT OF COLUMBIA	226	157	69	4,811	2,955	1,856
FLORIDA	8,026	6,166	1,860	2,418	1,801	617
GEORGIA	4,694	4,031	663	1,757	1,352	405
MARYLAND	6,027	4,248	1,779	3,973	3,598	375
NORTH CAROLINA	6,068	5,291	777	2,932	2,692	240
SOUTH CAROLINA	3,915	3,335	580	456	392	64
VIRGINIA	6,180	5,060	1,120	984	794	190
WEST VIRGINIA	2,024	1,704	320	306	219	87
EAST SOUTH CENTRAL	14,699	12,222	2,477	2,966	2,460	506
ALABAMA	4,667	3,735	932	486	415	71
KENTUCKY	3,526	3,085	441	368	291	77
MISSISSIPPI	2,299	2,036	263	185	148	37
TENNESSEE	4,207	3,366	841	1,927	1,606	321
WEST SOUTH CENTRAL	26,954	22,390	4,564	4,751	3,776	975
ARKANSAS	2,232	2,003	229	149	133	16
LOUISIANA	4,958	4,186	772	879	736	143
OKLAHOMA	3,136	2,609	527	564	432	132
TEXAS	16,628	13,592	3,036	3,159	2,475	684
MOUNTAIN	16,651	14,234	2,417	1,619	1,279	340
ARIZONA	3,309	2,803	506	43	34	9
COLORADO	4,295	3,733	562	597	453	144
IDAHO	1,058	906	152	145	112	33
MONTANA	1,091	915	176	94	52	42
NEVADA	697	511	186	0	0	0
NEW MEXICO	2,604	2,170	434	67	33	34
UTAH	2,809	2,522	287	673	595	78
WYOMING	788	674	114	0	0	0
PACIFIC	40,897	28,009	12,888	8,756	5,920	2,836
ALASKA	336	304	32	17	14	3
CALIFORNIA	30,336	20,333	10,003	7,700	5,113	2,587
HAWAII	1,342	1,033	309	99	29	70
OREGON	3,927	2,848	1,079	422	357	65
WASHINGTON	4,956	3,491	1,465	518	407	111
OUTLYING AREAS	2,505	2,192	313	1,605	671	934

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-60. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD: JANUARY 1983

DIVISION AND STATE	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. & COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
TOTAL, ALL INSTITUTIONS	358,824	37,696	34,660	10,144	45,639	151,524	23,695	55,466
NEW ENGLAND	30,731	3,313	3,089	815	3,144	14,219	1,871	4,280
CONNECTICUT	6,322	666	543	118	744	2,777	475	999
MAINE	1,095	97	132	74	163	261	106	262
MASSACHUSETTS	19,664	2,185	2,026	465	1,766	9,832	998	2,392
NEW HAMPSHIRE	1,276	134	126	57	131	589	67	172
RHODE ISLAND	1,358	156	168	66	221	323	115	309
VERMONT	1,016	75	94	35	119	437	110	146
MIDDLE ATLANTIC	64,686	6,470	6,822	1,378	9,283	24,524	5,189	11,020
NEW JERSEY	8,410	874	933	216	1,417	2,404	809	1,757
NEW YORK	37,077	3,434	3,728	824	5,287	14,740	2,953	6,111
PENNSYLVANIA	19,199	2,162	2,161	338	2,579	7,380	1,427	3,152
EAST NORTH CENTRAL	60,214	6,583	5,866	1,559	7,801	24,495	4,311	9,599
ILLINOIS	16,948	1,499	1,717	425	2,497	6,675	1,394	2,741
INDIANA	6,927	933	875	159	966	2,433	486	1,075
MICHIGAN	11,444	1,309	1,229	217	1,481	4,213	839	2,156
OHIO	16,059	1,878	1,239	273	1,895	7,476	981	2,317
WISCONSIN	8,836	964	806	485	962	3,698	611	1,310
WEST NORTH CENTRAL	26,184	2,251	2,222	572	2,904	12,460	1,693	4,082
IOWA	5,001	522	405	54	534	2,505	249	732
KANSAS	4,037	380	335	100	446	1,728	389	659
MINNESOTA	5,327	297	479	108	636	2,336	362	1,109
MISSOURI	7,490	567	607	137	836	3,961	423	959
NEBRASKA	2,148	190	229	76	231	941	160	321
NORTH DAKOTA	1,128	151	82	72	130	481	54	158
SOUTH DAKOTA	1,053	144	85	25	91	508	56	144
SOUTH ATLANTIC	55,606	6,287	5,155	1,442	7,514	23,351	3,088	8,769
DELAWARE	809	145	114	78	108	186	35	143
DISTRICT OF COLUMBIA	5,037	380	248	28	386	3,184	162	649
FLORIDA	10,444	1,006	802	378	1,750	3,999	679	1,830
GEORGIA	6,451	927	666	151	909	2,385	399	1,014
MARYLAND	10,000	1,512	1,356	230	1,195	3,878	472	1,357
NORTH CAROLINA	9,000	771	706	186	1,069	4,400	503	1,365
SOUTH CAROLINA	4,371	455	400	68	657	1,921	245	625
VIRGINIA	7,164	835	696	294	1,168	2,625	489	1,057
WEST VIRGINIA	2,330	256	167	29	272	773	104	729
EAST SOUTH CENTRAL	17,665	1,768	1,502	294	2,358	8,151	1,128	2,464
ALABAMA	5,153	560	436	54	768	2,345	338	652
KENTUCKY	3,894	259	353	118	443	1,900	223	498
MISSISSIPPI	2,484	190	220	28	323	1,138	148	437
TENNESSEE	6,134	759	493	94	824	2,768	419	777
WEST SOUTH CENTRAL	31,705	2,928	2,570	918	3,788	15,694	1,612	4,195
ARKANSAS	2,381	150	194	24	221	1,418	86	288
LOUISIANA	5,837	519	421	181	674	3,250	195	597
OKLAHOMA	3,700	398	304	89	461	1,731	176	541
TEXAS	19,787	1,861	1,651	624	2,432	9,295	1,155	2,769
MOUNTAIN	18,270	2,605	1,867	894	2,273	6,841	1,078	2,712
ARIZONA	3,352	532	377	174	433	1,053	209	574
COLORADO	4,892	775	575	218	647	1,564	347	766
IDAHO	1,203	108	104	53	135	570	74	159
MONTANA	1,185	136	127	70	185	410	59	198
NEVADA	697	67	78	89	78	235	24	126
NEW MEXICO	2,671	438	252	103	345	974	172	387
UTAH	3,482	465	283	133	324	1,725	151	401
WYOMING	788	84	71	54	126	310	42	101
PACIFIC	49,653	5,245	5,134	2,201	6,026	20,214	3,387	7,446
ALASKA	353	35	30	70	35	87	29	67
CALIFORNIA	38,036	4,149	4,037	1,500	4,712	15,270	2,769	5,599
HAWAII	1,441	70	108	111	91	731	59	271
OREGON	4,349	331	441	241	538	1,933	221	644
WASHINGTON	5,474	660	518	279	650	2,193	309	865
OUTLYING AREAS	4,110	246	433	71	548	1,575	338	899

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-61. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD: JANUARY 1983

DIVISION AND STATE	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. & COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
TOTAL, ALL INSTITUTIONS	272,955	28,816	28,376	8,688	29,893	118,868	16,788	41,526
NEW ENGLAND	22,860	2,638	2,579	697	2,029	10,331	1,386	3,200
CONNECTICUT	4,774	405	409	95	417	2,357	349	742
MAINE	854	92	111	58	104	228	69	192
MASSACHUSETTS	14,138	1,800	1,714	403	1,124	6,687	704	1,706
NEW HAMPSHIRE	955	120	114	49	105	361	57	149
RHODE ISLAND	1,236	150	150	65	186	300	104	281
VERMONT	903	71	81	27	93	398	103	130
MIDDLE ATLANTIC	46,337	4,618	5,268	1,192	5,426	18,590	3,421	7,822
NEW JERSEY	5,832	594	730	191	780	1,742	525	1,270
NEW YORK	26,642	2,450	2,966	695	3,007	11,398	1,911	4,215
PENNSYLVANIA	13,863	1,574	1,572	306	1,639	5,450	985	2,337
EAST NORTH CENTRAL	44,132	5,060	4,926	1,317	5,070	17,744	3,041	6,974
ILLINOIS	12,850	1,196	1,434	358	1,547	5,198	994	2,123
INDIANA	5,553	763	766	135	671	1,978	372	868
MICHIGAN	8,811	1,061	1,040	193	977	3,352	575	1,613
OHIO	9,766	1,249	996	230	1,092	4,218	608	1,373
WISCONSIN	7,152	791	690	401	783	2,998	492	997
WEST NORTH CENTRAL	21,903	1,949	1,953	515	2,218	10,491	1,358	3,419
IOWA	4,239	475	362	50	460	2,077	199	616
KANSAS	3,470	327	298	97	319	1,537	318	574
MINNESOTA	4,439	228	428	101	494	1,957	290	941
MISSOURI	5,967	451	507	118	568	3,240	334	749
NEBRASKA	1,857	177	210	64	182	818	127	279
NORTH DAKOTA	1,022	149	77	65	117	429	45	140
SOUTH DAKOTA	909	142	71	20	78	433	45	120
SOUTH ATLANTIC	44,570	5,086	4,385	1,288	5,168	19,698	2,305	6,640
DELAWARE	775	139	107	77	100	180	32	140
DISTRICT OF COLUMBIA	3,112	183	185	15	224	1,969	103	433
FLORIDA	7,967	768	649	339	1,064	3,414	483	1,250
GEORGIA	5,383	832	580	139	686	2,019	303	824
MARYLAND	7,846	1,359	1,162	195	816	3,175	315	824
NORTH CAROLINA	7,983	618	615	171	836	4,203	403	1,137
SOUTH CAROLINA	3,727	342	352	62	503	1,736	197	535
VIRGINIA	5,854	663	592	264	757	2,340	389	849
WEST VIRGINIA	1,923	182	143	26	182	662	80	648
EAST SOUTH CENTRAL	14,682	1,447	1,315	265	1,734	6,993	876	2,052
ALABAMA	4,150	460	358	45	499	2,070	224	489
KENTUCKY	3,376	228	325	112	369	1,621	185	536
MISSISSIPPI	2,184	187	209	24	270	995	122	377
TENNESSEE	4,972	572	423	84	596	2,307	340	650
WEST SOUTH CENTRAL	26,166	2,356	2,223	801	2,797	13,325	1,231	3,433
ARKANSAS	2,136	138	176	19	172	1,291	78	262
LOUISIANA	4,922	429	378	156	568	2,711	157	523
OKLAHOMA	3,041	340	266	83	326	1,447	148	431
TEXAS	16,067	1,449	1,403	543	1,731	7,876	848	2,217
MOUNTAIN	15,513	2,209	1,645	780	1,803	5,971	865	2,240
ARIZONA	2,837	456	340	161	362	393	165	460
COLORADO	4,186	643	524	191	490	1,390	300	648
IDAHO	1,018	97	92	43	97	512	52	125
MONTANA	967	120	101	62	130	346	42	166
NEVADA	511	51	63	70	40	169	24	94
NEW MEXICO	2,203	354	200	86	292	816	124	331
UTAH	3,117	410	261	120	302	1,562	128	334
WYOMING	674	78	64	47	90	283	30	82
PACIFIC	33,929	3,271	3,776	1,771	3,332	14,565	2,103	5,111
ALASKA	318	34	25	66	29	86	19	59
CALIFORNIA	25,446	2,491	2,877	1,160	2,452	11,103	1,634	3,729
HAWAII	1,062	60	98	102	58	525	35	184
OREGON	3,205	247	372	213	345	1,397	152	479
WASHINGTON	3,898	439	404	230	448	1,454	263	660
OUTLYING AREAS	2,863	182	306	62	316	1,160	202	635

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-62. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD: JANUARY 1983

DIVISION AND STATE	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. & COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
TOTAL, ALL INSTITUTIONS	85,869	8,880	6,284	1,456	15,746	32,656	6,907	13,940
NEW ENGLAND	7,871	675	510	118	1,115	3,888	485	1,080
CONNECTICUT	1,548	261	134	23	327	420	126	257
MAINE	241	5	21	16	59	33	37	70
MASSACHUSETTS	5,526	385	312	62	642	3,145	294	686
NEW HAMPSHIRE	321	14	12	8	26	228	10	23
RHODE ISLAND	122	6	18	1	35	23	11	28
VERMONT	113	4	13	8	26	39	7	16
MIDDLE ATLANTIC	18,349	1,852	1,554	186	3,857	5,934	1,768	3,198
NEW JERSEY	2,578	280	203	25	637	562	284	487
NEW YORK	10,435	984	762	129	2,280	3,342	1,042	1,896
PENNSYLVANIA	5,336	588	589	32	940	1,930	442	815
EAST NORTH CENTRAL	16,082	1,523	940	242	2,731	6,751	1,270	2,625
ILLINOIS	4,098	303	283	67	950	1,477	400	618
INDIANA	1,374	170	109	24	295	455	114	207
MICHIGAN	2,633	248	189	24	504	861	264	543
OHIO	6,293	629	243	43	803	3,258	373	944
WISCONSIN	1,684	173	116	84	179	700	119	313
WEST NORTH CENTRAL	4,281	302	269	57	686	1,969	335	663
IOWA	762	47	43	4	74	428	50	116
KANSAS	567	53	37	3	127	191	71	85
MINNESOTA	888	69	51	7	142	379	72	168
MISSOURI	1,523	116	100	19	268	721	89	210
NEBRASKA	291	13	19	12	49	123	33	42
NORTH DAKOTA	106	2	5	7	13	52	9	18
SOUTH DAKOTA	144	2	14	5	13	75	11	24
SOUTH ATLANTIC	11,036	1,201	770	154	2,346	3,653	783	2,129
DELAWARE	34	6	7	1	8	6	3	3
DISTRICT OF COLUMBIA	1,925	197	63	13	162	1,215	59	216
FLORIDA	2,477	238	153	39	686	585	196	580
GEORGIA	1,068	95	86	12	223	366	96	190
MARYLAND	2,154	153	194	35	379	703	157	533
NORTH CAROLINA	1,017	153	91	15	233	197	100	228
SOUTH CAROLINA	644	113	48	6	154	185	48	90
VIRGINIA	1,310	172	104	30	411	285	100	208
WEST VIRGINIA	407	74	24	3	90	111	24	81
EAST SOUTH CENTRAL	2,983	321	187	29	624	1,158	252	412
ALABAMA	1,003	100	78	9	269	275	109	163
KENTUCKY	518	31	28	6	74	279	38	62
MISSISSIPPI	300	3	11	4	53	143	26	60
TENNESSEE	1,162	187	70	10	228	461	79	127
WEST SOUTH CENTRAL	5,539	572	347	117	991	2,369	381	762
ARKANSAS	245	12	18	5	49	127	8	26
LOUISIANA	915	90	43	25	106	539	38	74
OKLAHOMA	659	58	38	6	135	284	28	110
TEXAS	3,720	412	248	81	701	1,419	307	552
MOUNTAIN	2,757	396	222	114	470	870	213	472
ARIZONA	515	76	37	13	71	160	44	114
COLORADO	706	132	51	27	157	174	47	118
IDAHO	185	11	12	10	38	58	22	34
MONTANA	218	16	26	8	55	64	17	32
NEVADA	186	16	15	19	38	66	0	32
NEW MEXICO	468	84	52	17	53	158	48	56
UTAH	365	55	22	13	22	163	23	67
WYOMING	114	6	7	7	36	27	12	19
PACIFIC	15,724	1,974	1,358	430	2,694	5,649	1,284	2,335
ALASKA	35	1	5	4	6	1	10	8
CALIFORNIA	12,590	1,658	1,160	340	2,260	4,167	1,135	1,870
HAWAII	379	10	10	9	33	206	24	87
OREGON	1,144	84	69	28	193	536	69	165
WASHINGTON	1,576	221	114	49	202	739	46	205
OUTLYING AREAS	1,247	64	127	9	232	415	136	264

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-63. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION, STATUS, AND SEX: JANUARY 1983

DIVISION AND STATE	FULL TIME					PART TIME				
	TOTAL	MEN		WOMEN		TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
TOTAL, ALL INSTITUTIONS	272,955	219,875	80.6%	53,080	19.4%	85,869	63,417	73.9%	22,452	26.1%
NEW ENGLAND	22,860	18,265	79.9	4,595	20.1	7,871	5,888	74.8	1,983	25.2
CONNECTICUT	4,774	3,615	75.7	1,159	24.3	1,548	1,070	69.1	478	30.9
MAINE	854	764	89.5	90	10.5	241	162	67.2	79	32.8
MASSACHUSETTS	14,138	11,316	80.0	2,822	20.0	5,526	4,244	76.8	1,282	23.2
NEW HAMPSHIRE	955	811	84.9	144	15.1	321	252	78.5	69	21.5
RHODE ISLAND	1,236	1,018	82.4	218	17.6	122	85	69.7	37	30.3
VERMONT	903	741	82.1	162	17.9	113	75	66.4	38	33.6
MIDDLE ATLANTIC	46,337	37,177	80.2	9,160	19.8	18,349	13,817	75.3	4,532	24.7
NEW JERSEY	5,832	4,575	78.4	1,257	21.6	2,578	1,972	76.5	606	23.5
NEW YORK	26,642	21,390	80.3	5,252	19.7	10,435	7,837	75.1	2,598	24.9
PENNSYLVANIA	13,863	11,212	80.9	2,651	19.1	5,336	4,008	75.1	1,328	24.9
EAST NORTH CENTRAL	44,132	35,514	80.5	8,618	19.5	16,082	11,707	72.8	4,375	27.2
ILLINOIS	12,850	10,202	79.4	2,648	20.6	4,098	2,956	72.1	1,142	27.9
INDIANA	5,553	4,577	82.4	976	17.6	1,374	955	69.5	419	30.5
MICHIGAN	8,811	7,101	80.6	1,710	19.4	2,633	1,862	70.7	771	29.3
OHIO	9,766	8,009	82.0	1,757	18.0	6,293	4,816	76.5	1,477	23.5
WISCONSIN	7,152	5,625	78.6	1,527	21.4	1,684	1,118	66.4	566	33.6
WEST NORTH CENTRAL	21,903	18,099	82.6	3,804	17.4	4,281	2,991	69.9	1,290	30.1
IOWA	4,239	3,500	82.6	739	17.4	762	503	66.0	259	34.0
KANSAS	3,470	2,822	81.3	648	18.7	567	353	62.3	214	37.7
MINNESOTA	4,439	3,708	83.5	731	16.5	888	633	71.3	255	28.7
MISSOURI	5,967	4,790	80.3	1,177	19.7	1,523	1,132	74.3	391	25.7
NEBRASKA	1,857	1,656	89.2	201	10.8	291	222	76.3	69	23.7
NORTH DAKOTA	1,022	854	83.6	168	16.4	106	65	61.3	41	38.7
SOUTH DAKOTA	909	769	84.6	140	15.4	144	83	57.6	61	42.4
SOUTH ATLANTIC	44,570	35,730	80.2	8,840	19.8	11,036	8,383	76.0	2,653	24.0
DELAWARE	775	593	76.5	182	23.5	34	22	64.7	12	35.3
DISTRICT OF COLUMBIA	3,112	2,332	74.9	780	25.1	1,925	1,602	83.2	323	16.8
FLORIDA	7,967	6,354	79.8	1,613	20.2	2,477	1,916	77.4	561	22.6
GEORGIA	5,383	4,487	83.4	896	16.6	1,068	817	76.5	251	23.5
MARYLAND	7,846	6,203	79.1	1,643	20.9	2,154	1,611	74.8	543	25.2
NORTH CAROLINA	7,983	6,580	82.4	1,403	17.6	1,017	668	65.7	349	34.3
SOUTH CAROLINA	3,727	2,862	76.8	865	23.2	644	496	77.0	148	23.0
VIRGINIA	5,854	4,777	81.6	1,077	18.4	1,310	945	72.1	365	27.9
WEST VIRGINIA	1,923	1,542	80.2	381	19.8	407	306	75.2	101	24.8
EAST SOUTH CENTRAL	14,682	12,026	81.9	2,656	18.1	2,983	2,250	75.4	733	24.6
ALABAMA	4,150	3,405	82.0	745	18.0	1,003	753	75.1	250	24.9
KENTUCKY	3,376	2,806	83.1	570	16.9	518	371	71.6	147	28.4
MISSISSIPPI	2,184	1,768	81.0	416	19.0	300	239	79.7	61	20.3
TENNESSEE	4,972	4,047	81.4	925	18.6	1,162	887	76.3	275	23.7
WEST SOUTH CENTRAL	26,166	20,987	80.2	5,179	19.8	5,539	4,195	75.7	1,344	24.3
ARKANSAS	2,136	1,788	83.7	348	16.3	245	174	71.0	71	29.0
LOUISIANA	4,922	3,816	77.5	1,106	22.5	915	682	74.5	233	25.5
OKLAHOMA	3,041	2,554	84.0	487	16.0	659	524	79.5	135	20.5
TEXAS	16,067	12,829	79.8	3,238	20.2	3,720	2,815	75.7	905	24.3
MOUNTAIN	15,513	12,911	83.2	2,602	16.8	2,757	1,965	71.3	792	28.7
ARIZONA	2,837	2,393	84.3	444	15.7	515	390	75.7	125	24.3
COLORADO	4,186	3,586	85.7	600	14.3	706	528	74.8	178	25.2
IDAHO	1,018	890	87.4	128	12.6	185	130	70.3	55	29.7
MONTANA	967	820	84.8	147	15.2	218	131	60.1	87	39.9
NEVADA	511	447	87.5	64	12.5	186	147	79.0	39	21.0
NEW MEXICO	2,203	1,727	78.4	476	21.6	468	316	67.5	152	32.5
UTAH	3,117	2,490	79.9	627	20.1	365	256	70.1	109	29.9
WYOMING	674	558	82.8	116	17.2	114	67	58.8	47	41.2
PACIFIC	33,929	27,480	81.0	6,449	19.0	15,724	11,401	72.5	4,323	27.5
ALASKA	318	278	87.4	40	12.6	35	25	71.4	10	28.6
CALIFORNIA	25,446	20,553	80.8	4,893	19.2	12,590	9,176	72.9	3,414	27.1
HAWAII	1,062	841	79.2	221	20.8	379	271	71.5	108	28.5
OREGON	3,205	2,654	82.8	551	17.2	1,144	774	67.7	370	32.3
WASHINGTON	3,898	3,154	80.9	744	19.1	1,576	1,155	73.3	421	26.7
OUTLYING AREAS	2,863	1,686	58.9	1,177	41.1	1,247	820	65.8	427	34.2

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-64. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES, BY TYPE OF INSTITUTION, STATUS, AND FIELD: JANUARY 1983

TYPE OF INSTITUTION AND STATUS	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. AND COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
ALL INSTITUTIONS	358,824	37,696	34,660	10,144	45,639	151,524	23,695	55,466
FULL TIME	272,955	28,816	28,376	8,688	29,893	118,868	16,788	41,526
PART TIME	85,869	8,880	6,284	1,456	15,746	32,656	6,907	13,940
INSTITUTIONS GRANTING:								
DOCTORATE IN S&E	236,360	26,167	19,389	7,020	18,412	126,985	10,416	28,171
FULL TIME	191,731	21,849	16,986	6,313	14,586	100,756	8,230	23,011
PART TIME	44,829	4,318	2,403	707	3,826	26,229	2,186	5,160
MASTER'S IN S&E	40,545	3,440	5,027	1,400	7,965	7,440	4,837	10,436
FULL TIME	29,618	2,144	3,981	1,132	5,193	5,865	3,485	7,818
PART TIME	10,927	1,296	1,046	268	2,772	1,575	1,352	2,618
BACHELOR'S IN S&E	29,469	1,868	4,433	725	5,620	5,937	3,346	7,540
FULL TIME	22,219	1,422	3,700	566	3,923	4,586	2,393	5,629
PART TIME	7,250	446	733	159	1,697	1,351	953	1,911
OTHER DEGREES	610	30	34	44	80	269	33	120
FULL TIME	489	17	24	30	53	244	21	98
PART TIME	121	13	10	14	27	23	12	22
2-YEAR INSTITUTIONS	51,640	6,191	5,777	955	13,562	10,893	5,063	9,199
FULL TIME	28,898	3,384	3,685	647	6,138	7,415	2,659	4,970
PART TIME	22,742	2,807	2,092	308	7,424	3,478	2,404	4,229

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-65. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES, BY TYPE OF INSTITUTION, CONTROL, AND SEX: JANUARY 1983

TYPE OF INSTITUTION AND CONTROL	TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
ALL INSTITUTIONS	272,955	219,875	80.6%	53,080	19.4%
PUBLIC	190,544	153,500	80.6	37,044	19.4
PRIVATE	82,411	66,375	80.5	16,036	19.5
INSTITUTIONS GRANTING:					
DOCTORATE IN S&E	191,731	156,224	81.5	35,507	18.5
PUBLIC	132,751	107,981	81.3	24,770	18.7
PRIVATE	58,980	48,243	81.8	10,737	18.2
MASTER'S IN S&E	29,618	23,914	80.7	5,704	19.3
PUBLIC	22,859	18,588	81.3	4,271	18.7
PRIVATE	6,759	5,326	78.8	1,433	21.2
BACHELOR'S IN S&E	22,219	17,634	79.4	4,585	20.6
PUBLIC	7,256	6,039	83.2	1,217	16.8
PRIVATE	14,963	11,595	77.5	3,368	22.5
OTHER DEGREES	489	451	92.2	38	7.8
PUBLIC	291	282	96.9	9	3.1
PRIVATE	198	169	85.4	29	14.6
2-YEAR INSTITUTIONS	28,898	21,652	74.9	7,246	25.1
PUBLIC	27,387	20,610	75.3	6,777	24.7
PRIVATE	1,511	1,042	69.0	469	31.0

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-66. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES, BY TYPE OF INSTITUTION, CONTROL, AND SEX: JANUARY 1983

TYPE OF INSTITUTION AND CONTROL	TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
ALL INSTITUTIONS	85,869	63,417	73.9%	22,452	26.1%
PUBLIC	55,917	40,493	72.4	15,424	27.6
PRIVATE	29,952	22,924	76.5	7,028	23.5
INSTITUTIONS GRANTING:					
DOCTORATE IN S&E	44,829	33,781	75.4	11,048	24.6
PUBLIC	26,445	18,987	71.8	7,458	28.2
PRIVATE	18,384	14,794	80.5	3,590	19.5
MASTER'S IN S&E	10,927	7,858	71.9	3,069	28.1
PUBLIC	6,555	4,690	71.5	1,865	28.5
PRIVATE	4,372	3,168	72.5	1,204	27.5
BACHELOR'S IN S&E	7,250	5,071	69.9	2,179	30.1
PUBLIC	1,299	924	71.1	375	28.9
PRIVATE	5,951	4,147	69.7	1,804	30.3
OTHER DEGREES	121	94	77.7	27	22.3
PUBLIC	45	43	95.6	2	4.4
PRIVATE	76	51	67.1	25	32.9
2-YEAR INSTITUTIONS	22,742	16,613	73.0	6,129	27.0
PUBLIC	21,573	15,849	73.5	5,724	26.5
PRIVATE	1,169	764	65.4	405	34.6

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-67. — SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	5,991	6,215	6,353	6,704	6,940	7,269	7,774
ENGINEERS	272	351	347	369	367	363	397
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	5	10	0	1	0	0	0
CHEMICAL ENGINEERS	16	10	7	11	9	9	11
CIVIL ENGINEERS	59	76	92	91	94	90	100
ELECTRICAL ENGINEERS	75	111	104	134	121	121	114
MECHANICAL ENGINEERS	66	87	84	87	90	95	105
OTHER ENGINEERS	51	57	60	45	53	48	67
PHYSICAL SCIENTISTS	787	767	814	952	1,009	1,024	810
ASTRONOMERS 2/	–	–	–	0	1	1	1
CHEMISTS	469	428	457	447	464	480	466
PHYSICISTS	251	255	278	271	292	282	269
OTHER PHYSICAL SCIENTISTS	67	84	79	234	252	261	74
ENVIRONMENTAL SCIENTISTS	113	72	52	168	167	182	90
ATMOSPHERIC SCIENTISTS	7	1	1	1	2	1	2
EARTH SCIENTISTS	104	68	50	62	42	52	41
OCEANOGRAPHERS	2	3	1	1	1	8	12
OTHER ENVIRONMENTAL SCIENTISTS 2/	–	–	–	104	122	121	35
MATHEMATICAL AND COMPUTER SCIENTISTS	929	959	1,042	995	1,061	1,166	1,198
MATHEMATICIANS	822	821	904	831	891	901	896
COMPUTER SCIENTISTS	107	138	138	164	170	265	302
LIFE SCIENTISTS	1,944	2,119	2,312	2,365	2,481	2,548	3,287
AGRICULTURAL SCIENTISTS	148	232	258	255	219	208	272
BIOLOGICAL SCIENTISTS	929	999	1,013	842	877	937	1,008
MEDICAL SCIENTISTS	867	888	1,041	1,118	1,205	1,209	1,631
OTHER LIFE SCIENTISTS 2/	–	–	–	150	180	194	376
PSYCHOLOGISTS	486	442	401	413	436	475	483
SOCIAL SCIENTISTS	1,460	1,505	1,385	1,442	1,419	1,511	1,509
ECONOMISTS	307	315	265	290	295	307	322
POLITICAL SCIENTISTS	338	332	317	351	334	394	393
SOCIOLOGISTS	534	518	494	501	485	524	488
OTHER SOCIAL SCIENTISTS	281	340	309	300	305	284	306

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-68. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	4,655	4,922	5,006	5,314	5,357	5,611	5,780
ENGINEERS	223	286	284	277	269	266	323
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	4	9	0	0	0	0	0
CHEMICAL ENGINEERS	14	10	7	6	5	5	7
CIVIL ENGINEERS	41	50	69	61	64	61	79
ELECTRICAL ENGINEERS	63	88	80	96	81	86	97
MECHANICAL ENGINEERS	55	77	74	75	75	75	77
OTHER ENGINEERS	46	52	54	39	44	39	63
PHYSICAL SCIENTISTS	683	653	692	766	791	803	689
ASTRONOMERS 2/	-	-	-	0	0	0	0
CHEMISTS	409	372	392	390	402	411	399
PHYSICISTS	219	222	241	228	236	234	224
OTHER PHYSICAL SCIENTISTS	55	59	59	148	153	158	66
ENVIRONMENTAL SCIENTISTS	85	49	35	107	104	124	82
ATMOSPHERIC SCIENTISTS	6	1	1	1	2	1	2
EARTH SCIENTISTS	77	46	33	49	33	46	35
OCEANOGRAPHERS	2	2	1	1	1	8	12
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	56	68	69	33
MATHEMATICAL AND COMPUTER SCIENTISTS	766	794	843	807	828	908	925
MATHEMATICIANS	687	683	729	701	720	724	719
COMPUTER SCIENTISTS	79	111	114	106	108	184	206
LIFE SCIENTISTS	1,341	1,526	1,649	1,890	1,943	1,970	2,191
AGRICULTURAL SCIENTISTS	143	222	235	231	201	181	233
BIOLOGICAL SCIENTISTS	737	860	790	752	770	818	876
MEDICAL SCIENTISTS	461	504	624	768	806	798	757
OTHER LIFE SCIENTISTS 2/	-	-	-	139	166	173	325
PSYCHOLOGISTS	386	361	339	328	318	351	361
SOCIAL SCIENTISTS	1,171	1,253	1,164	1,139	1,104	1,189	1,209
ECONOMISTS	247	261	224	224	228	222	243
POLITICAL SCIENTISTS	287	295	291	280	260	314	316
SOCIOLOGISTS	421	447	423	410	393	439	415
OTHER SOCIAL SCIENTISTS	216	250	226	225	223	214	235

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-69. -- PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	1,336	1,293	1,347	1,390	1,583	1,658	1,994
ENGINEERS	49	65	63	92	98	97	74
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1	1	0	1	0	0	0
CHEMICAL ENGINEERS	2	0	0	5	4	4	4
CIVIL ENGINEERS	18	26	23	30	30	29	21
ELECTRICAL ENGINEERS	12	23	24	38	40	35	17
MECHANICAL ENGINEERS	11	10	10	12	15	20	28
OTHER ENGINEERS	5	5	6	6	9	9	4
PHYSICAL SCIENTISTS	104	114	122	186	218	221	121
ASTRONOMERS 2/	-	-	-	0	1	1	1
CHEMISTS	60	56	65	57	62	69	67
PHYSICISTS	32	33	37	43	56	48	45
OTHER PHYSICAL SCIENTISTS	12	25	20	86	99	103	8
ENVIRONMENTAL SCIENTISTS	28	23	17	61	63	58	8
ATMOSPHERIC SCIENTISTS	1	0	0	0	0	0	0
EARTH SCIENTISTS	27	22	17	13	9	6	6
OCEANOGRAPHERS	0	1	0	0	0	0	0
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	48	54	52	2
MATHEMATICAL AND COMPUTER SCIENTISTS	163	165	199	188	233	258	273
MATHEMATICIANS	135	138	175	130	171	177	177
COMPUTER SCIENTISTS	28	27	24	58	62	81	96
LIFE SCIENTISTS	603	593	663	475	538	578	1,096
AGRICULTURAL SCIENTISTS	5	10	23	24	18	27	39
BIOLOGICAL SCIENTISTS	192	199	223	90	107	119	132
MEDICAL SCIENTISTS	406	384	417	350	399	411	874
OTHER LIFE SCIENTISTS 2/	-	-	-	11	14	21	51
PSYCHOLOGISTS	100	81	62	85	118	124	122
SOCIAL SCIENTISTS	289	252	221	303	315	322	300
ECONOMISTS	60	54	41	66	67	85	79
POLITICAL SCIENTISTS	51	37	26	71	74	80	77
SOCIOLOGISTS	113	71	71	91	92	85	73
OTHER SOCIAL SCIENTISTS	65	90	83	75	82	72	71

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-70. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY FIELD: JANUARY 1978 - JANUARY 1983 1/

FIELD	1978	1980	1981	1982	1983
TOTAL	5,729	5,786	5,905	6,180	6,518
ENGINEERS	310	315	311	309	360
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	0	0	0	0	0
CHEMICAL ENGINEERS	7	11	6	6	8
CIVIL ENGINEERS	77	72	76	73	88
ELECTRICAL ENGINEERS	92	115	101	100	106
MECHANICAL ENGINEERS	78	76	79	84	92
OTHER ENGINEERS	56	42	49	45	66
PHYSICAL SCIENTISTS	757	849	890	904	746
ASTRONOMERS 2/	-	0	1	1	1
CHEMISTS	425	416	428	445	431
PHYSICISTS	263	250	264	255	250
OTHER PHYSICAL SCIENTISTS	69	184	197	204	67
ENVIRONMENTAL SCIENTISTS	47	132	126	143	87
ATMOSPHERIC SCIENTISTS	1	1	2	1	2
EARTH SCIENTISTS	45	58	37	47	39
OCEANOGRAPHERS	1	1	1	8	12
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	72	86	86	34
MATHEMATICAL AND COMPUTER SCIENTISTS	937	886	926	1,010	1,050
MATHEMATICIANS	814	764	796	797	812
COMPUTER SCIENTISTS	123	121	130	212	238
LIFE SCIENTISTS	2,063	1,981	2,051	2,100	2,512
AGRICULTURAL SCIENTISTS	244	242	208	195	243
BIOLOGICAL SCIENTISTS	948	796	815	865	939
MEDICAL SCIENTISTS	871	799	859	859	985
OTHER LIFE SCIENTISTS 2/	-	144	171	182	346
PSYCHOLOGISTS	364	351	353	386	395
SOCIAL SCIENTISTS	1,251	1,274	1,249	1,331	1,368
ECONOMISTS	245	253	257	260	285
POLITICAL SCIENTISTS	301	314	299	354	365
SOCIOLOGISTS	449	451	439	475	446
OTHER SOCIAL SCIENTISTS	256	258	255	243	271

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-71. — MALE SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	4,928	5,195	5,753	3,925	4,014	4,144	1,003	1,181	1,609
ENGINEERS	366	357	387	275	261	315	91	96	72
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1	0	0	0	0	0	1	0	0
CHEMICAL ENGINEERS	11	9	9	6	5	7	5	4	2
CIVIL ENGINEERS	89	88	95	60	60	74	29	28	21
ELECTRICAL ENGINEERS	134	121	114	96	86	97	38	35	17
MECHANICAL ENGINEERS	86	93	104	74	73	76	12	20	28
OTHER ENGINEERS	45	46	65	39	37	61	6	9	4
PHYSICAL SCIENTISTS	784	827	679	646	662	579	138	165	100
ASTRONOMERS	0	1	1	0	0	0	0	1	1
CHEMISTS	372	392	383	331	339	331	41	53	52
PHYSICISTS	240	252	241	202	211	200	38	41	41
OTHER PHYSICAL SCIENTISTS	172	182	54	113	112	48	59	70	6
ENVIRONMENTAL SCIENTISTS	118	123	71	81	90	65	37	33	6
ATMOSPHERIC SCIENTISTS	1	1	2	1	1	2	0	0	0
EARTH SCIENTISTS	55	45	35	44	40	31	11	5	4
OCEANOGRAPHERS	0	2	5	0	2	5	0	0	0
OTHER ENVIRONMENTAL SCIENTISTS	62	75	29	36	47	27	26	28	2
MATHEMATICAL AND COMPUTER SCIENTISTS	717	808	842	573	619	637	144	189	205
MATHEMATICIANS	577	604	607	486	486	486	91	118	121
COMPUTER SCIENTISTS	140	204	235	87	133	151	53	71	84
LIFE SCIENTISTS	1,654	1,719	2,408	1,323	1,322	1,461	331	397	947
AGRICULTURAL SCIENTISTS	213	171	229	194	152	195	19	19	34
BIOLOGICAL SCIENTISTS	588	611	657	526	530	568	62	81	89
MEDICAL SCIENTISTS	799	879	1,474	554	587	661	245	292	813
OTHER LIFE SCIENTISTS	54	58	48	49	53	37	5	5	11
PSYCHOLOGISTS	269	281	280	214	208	215	55	73	65
SOCIAL SCIENTISTS	1,020	1,080	1,086	813	852	872	207	228	214
ECONOMISTS	248	269	277	198	202	218	50	67	59
POLITICAL SCIENTISTS	281	312	312	227	248	252	54	64	60
SOCIOLOGISTS	298	302	287	249	259	248	49	43	39
OTHER SOCIAL SCIENTISTS	193	197	210	139	143	154	54	54	56

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-72. -- FEMALE SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY STATUS: JANUARY 1980 AND JANUARY 1982-83

FIELD	TOTAL			FULL TIME			PART TIME		
	1980	1982	1983	1980	1982	1983	1980	1982	1983
TOTAL	1,776	2,074	2,021	1,389	1,597	1,636	387	477	385
ENGINEERS	3	6	10	2	5	8	1	1	2
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	0	0	0	0	0	0	0	0	0
CHEMICAL ENGINEERS	0	0	2	0	0	0	0	0	2
CIVIL ENGINEERS	2	2	5	1	1	5	1	1	0
ELECTRICAL ENGINEERS	0	0	0	0	0	0	0	0	0
MECHANICAL ENGINEERS	1	2	1	1	2	1	0	0	0
OTHER ENGINEERS	0	2	2	0	2	2	0	0	0
PHYSICAL SCIENTISTS	168	197	131	120	141	110	48	56	21
ASTRONOMERS	0	0	0	0	0	0	0	0	0
CHEMISTS	75	88	83	59	72	68	16	16	15
PHYSICISTS	31	30	28	26	23	24	5	7	4
OTHER PHYSICAL SCIENTISTS	62	79	20	35	46	18	27	33	2
ENVIRONMENTAL SCIENTISTS	50	59	19	26	34	17	24	25	2
ATMOSPHERIC SCIENTISTS	0	0	0	0	0	0	0	0	0
EARTH SCIENTISTS	7	7	6	5	6	4	2	1	2
OCEANOGRAPHERS	1	6	7	1	6	7	0	0	0
OTHER ENVIRONMENTAL SCIENTISTS	42	46	6	20	22	6	22	24	0
MATHEMATICAL AND COMPUTER SCIENTISTS	278	358	356	234	289	288	44	69	68
MATHEMATICIANS	254	297	289	215	238	233	39	59	56
COMPUTER SCIENTISTS	24	61	67	19	51	55	5	10	12
LIFE SCIENTISTS	711	829	879	567	648	730	144	181	149
AGRICULTURAL SCIENTISTS	42	37	43	37	29	38	5	8	5
BIOLOGICAL SCIENTISTS	254	326	351	226	288	308	28	38	43
MEDICAL SCIENTISTS	319	330	157	214	211	96	105	119	61
OTHER LIFE SCIENTISTS	96	136	328	90	120	288	6	16	40
PSYCHOLOGISTS	144	194	203	114	143	146	30	51	57
SOCIAL SCIENTISTS	422	431	423	326	337	337	96	94	86
ECONOMISTS	42	38	45	26	20	25	16	18	20
POLITICAL SCIENTISTS	70	82	81	53	66	64	17	16	17
SOCIOLOGISTS	203	222	201	161	180	167	42	42	34
OTHER SOCIAL SCIENTISTS	107	89	96	86	71	81	21	18	15

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-73. -- SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES BY FIELD AND CONTROL: JANUARY 1982 AND JANUARY 1983

FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	7,269	7,774	6.9%	3,975	4,131	3.9%	3,294	3,643	10.6%
ENGINEERS	363	397	9.4	241	275	14.1	122	122	.0
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	0	0	(1)	0	0	(1)	0	0	(1)
CHEMICAL ENGINEERS	9	11	22.2	1	2	100.0	8	9	12.5
CIVIL ENGINEERS	90	100	11.1	62	82	32.3	28	18	-35.7
ELECTRICAL ENGINEERS	121	114	-5.8	82	75	-8.5	39	39	.0
MECHANICAL ENGINEERS	95	105	10.5	59	68	15.3	36	37	2.8
OTHER ENGINEERS	48	67	39.6	37	48	29.7	11	19	72.7
PHYSICAL SCIENTISTS	1,024	810	-20.9	514	517	.6	510	293	-42.5
ASTRONOMERS	1	1	.0	1	1	.0	0	0	(1)
CHEMISTS	480	466	-2.9	288	278	-3.5	192	188	-2.1
PHYSICISTS	282	269	-4.6	174	178	2.3	108	91	-15.7
OTHER PHYSICAL SCIENTISTS	261	74	-71.6	51	60	17.6	210	14	-93.3
ENVIRONMENTAL SCIENTISTS	182	90	-50.5	77	79	2.6	105	11	-89.5
ATMOSPHERIC SCIENTISTS	1	2	100.0	1	2	100.0	0	0	(1)
EARTH SCIENTISTS	52	41	-21.2	40	30	-25.0	12	11	-8.3
OCEANOGRAPHERS	8	12	50.0	8	12	50.0	0	6	(1)
OTHER ENVIRONMENTAL SCIENTISTS	121	35	-71.1	28	35	25.0	93	0	-100.0
MATHEMATICAL AND COMPUTER SCIENTISTS	1,166	1,198	2.7	834	875	4.9	332	323	-2.7
MATHEMATICIANS	901	896	-.6	615	623	1.3	286	273	-4.5
COMPUTER SCIENTISTS	265	302	14.0	219	252	15.1	46	50	8.7
LIFE SCIENTISTS	2,548	3,287	29.0	949	1,008	6.2	1,599	2,279	42.5
AGRICULTURAL SCIENTISTS	208	272	30.8	190	234	23.2	18	38	111.1
BIOLOGICAL SCIENTISTS	937	1,008	7.6	596	601	.8	341	407	19.4
MEDICAL SCIENTISTS	1,209	1,631	34.9	51	38	-25.5	1,158	1,593	37.6
OTHER LIFE SCIENTISTS	194	376	93.8	112	135	20.5	82	241	193.9
PSYCHOLOGISTS	475	483	1.7	354	352	-.6	121	131	8.3
SOCIAL SCIENTISTS	1,511	1,509	-.1	1,006	1,025	1.9	505	484	-4.2
ECONOMISTS	307	322	4.9	197	210	6.6	110	112	1.8
POLITICAL SCIENTISTS	394	393	-.3	264	276	4.5	130	117	-10.0
SOCIOLOGISTS	524	488	-6.9	356	333	-6.5	168	155	-7.7
OTHER SOCIAL SCIENTISTS	286	306	7.0	189	206	9.0	97	100	3.1

1/ DATA OR COMPUTATION ERROR.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-74. — SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES: JANUARY 1982 AND JANUARY 1983

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
TOTAL, ALL INSTITUTIONS	7,774	7,269	5,780	5,611	1,994	1,658	6,518	6,179
1 HOWARD UNIVERSITY	1,953	1,631I	1,017	979I	936	652I	1,261	1,129I
2 CHEYNEY STATE COLLEGE	469I	456	469I	456	0I	0	469I	456
3 WAYNE COUNTY CMTY COLLEGE	258I	234I	78I	76I	180I	158I	177I	160I
4 UNIVERSITY OF D C	226I	218I	157I	153I	69I	65I	192I	186I
5 MEHARRY MEDICAL COLLEGE	196I	193I	195I	192I	1I	1I	196I	193I
6 FLORIDA A & M UNIVERSITY	190	225	188	216	2	9	188	220
7 TUSKEGEE INSTITUTE	183	144I	167	139I	16	5I	174	140I
8 SOUTHERN U & A&M COLLEGE	180I	175I	179I	174I	1I	1I	179I	174I
9 NC AG & TECH STATE UNIV	148	166	122	110	26	56	143	164
10 TENNESSEE STATE UNIV	144I	140	137I	133	7I	7	139I	136
TOTAL, 1ST 10 INSTS.	3,947	3,582	2,709	2,628	1,238	954	3,120	2,960
11 JACKSON STATE UNIVERSITY	144	130I	118	114I	26	16I	128	121I
12 TEXAS SOUTHERN UNIV	128I	124I	113I	110I	15I	14I	118I	114I
13 ALABAMA A & M UNIVERSITY	125	122	103	84	22	38	108	93
14 NORTH CAROLINA CNTRL UNIV	113	110	96	91	17	19	100	96
15 CHICAGO STATE UNIVERSITY	111	118	76	78	35	40	93	93
16 MOREHOUSE COLLEGE	111I	106I	68I	66I	43I	40I	88I	84I
17 VIRGINIA STATE UNIVERSITY	98I	95	81I	79	17I	16	90I	87
18 MORGAN STATE UNIVERSITY	98I	95I	92I	89I	6I	6I	93I	90I
19 COPPIN STATE COLLEGE	98	69	50	49	48	20	69	54
20 SOUTH CAROLINA ST COLLEGE	89	86	89	83	0	3	89	74
TOTAL, 1ST 20 INSTS.	5,062	4,637	3,595	3,471	1,467	1,166	4,101	3,871
21 COL OF THE VIRGIN ISLANDS	87	57	52	25	35	32	62	31
22 LINCOLN UNIVERSITY (MO)	86I	82I	76I	73I	10I	9I	84I	80I
23 XAVIER UNIVERSITY OF LA	84I	81I	66I	64I	18I	17I	74I	72I
24 ALABAMA STATE UNIVERSITY	80I	76	54I	52	26I	24	64I	61
25 UNIV OF ARK PINE BLUFF	76	69	48	62	28	1	56	62
26 FORT VALLEY STATE COLLEGE	72I	69	72I	69	0I	0	72I	69
27 PRAIRIE VIEW A & M UNIV	70I	67	61I	59	9I	8	64I	62
28 WINSTON-SALEM STATE UNIV	69I	55	59I	57	10I	9	61I	59
29 DELAWARE STATE COLLEGE	68	64	66	63	2	1	65	63
30 GRAMBLING STATE UNIV	67	68	62	61	5	7	61	63
TOTAL, 1ST 30 INSTS.	5,821	5,280	4,211	4,056	1,610	1,274	4,767	4,495
31 ALCORN STATE UNIVERSITY	66I	63I	66I	63I	0I	0I	66I	63I
32 FAYETTEVILLE STATE UNIV	63I	60	49I	47	14I	13	59I	0
33 COMPTON COMMUNITY COLLEGE	62	83	20	20	42	63	37	45
34 HAMPTON INSTITUTE	61I	60I	59I	58I	2I	2I	59I	58I
35 U OF MD EASTERN SHORE	60	53	55	49	5	4	56	51
36 BOWIE STATE COLLEGE	59I	56I	42I	40I	17I	16I	49I	46I
37 CLARK COLLEGE	58I	56I	39I	38I	19I	18I	49I	47I
38 BETHUNE COOKMAN COLLEGE	57	58	53	54	4	4	55	57
39 VIRGINIA UNION UNIVERSITY	56I	53I	25I	24I	31I	29I	38I	36I
40 LINCOLN UNIVERSITY (PA)	53I	50I	41I	39I	12I	11I	46I	43I
TOTAL, 1ST 40 INSTS.	6,416	5,922	4,660	4,488	1,756	1,434	5,283	4,944
41 LANGSTON UNIVERSITY	51	26	45	23	6	3	48	25
42 SAVANNAH STATE COLLEGE	50	43I	50	43I	0	0I	50	43I
43 SPELMAN COLLEGE	50	46	29	31	21	15	36	36
44 FISK UNIVERSITY	47	61I	30	33I	17	28I	34	47I
45 ALBANY STATE COLLEGE	46	41	43	40	3	1	43	40
46 ELIZABETH CITY STATE UNIV	46I	44I	34I	33I	12I	11I	38I	36I
47 ATLANTA UNIVERSITY	46	51	38	39	8	12	41	41
48 CENTRAL STATE UNIVERSITY	46	48	42	41	4	7	44	44
49 MISS VALLEY STATE UNIV	44	55	44	53	0	2	44	54
50 SHAW COLLEGE AT DETROIT	44I	42I	33I	32I	11I	10I	37I	35I
TOTAL, 1ST 50 INSTS.	6,886	6,379	5,048	4,856	1,838	1,523	5,700	5,347

SEE FOOTNOTES AT END OF TABLE.

TABLE B-74. -- SCIENTISTS AND ENGINEERS EMPLOYED AT HISTORICALLY BLACK COLLEGES: JANUARY 1982 AND JANUARY 1983

- CONTINUED

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1983	1982	1983	1982	1983	1982	1983	1982
51 TALLADEGA COLLEGE	40I	39I	37I	36I	3I	3I	37I	36I
52 BENEDICT COLLEGE	36	39	35	38	1	1	35	39
53 HIGHLAND PARK CMTY COL	35I	32	22I	21	13I	11	31I	28E
54 WILBERFORCE UNIVERSITY	35I	33I	22I	21I	13I	12I	28I	26I
55 LE MOYNE-OWEN COLLEGE	31I	29I	22I	21I	9I	8I	26I	24I
56 LAWSON STATE CMTY COLLEGE	31I	29	18I	18	13I	11	22I	21
57 BENNETT COLLEGE (NC)	30I	28I	19I	18I	11I	10I	27I	25I
58 JOHNSON C SMITH UNIV	29	20I	27	20I	2	0I	26	20I
59 MORRIS BROWN COLLEGE	29	15	21	11	8	4	25	12
60 FLORIDA MEMORIAL COLLEGE	29	11I	15	5I	14	6I	22	10I
TOTAL, 1ST 60 INSTS.	7,211	6,654	5,286	5,065	1,925	1,589	5,982	5,590
61 ST AUGUSTINES COLLEGE	29	31	27	28	2	3	25	28
62 NORFOLK STATE UNIVERSITY	28I	27	26I	25	2I	2	26I	25
63 KENTUCKY STATE UNIVERSITY	28I	27I	28I	27I	0I	0I	28I	27I
64 KNOXVILLE COLLEGE	27I	25I	17I	16I	10I	9I	27I	25I
65 S D BISHOP ST JR COLLEGE	26	20I	26	20I	0	0I	26	20I
66 TOUGALOO COLLEGE	26I	25I	26I	25I	0I	0I	26I	25I
67 OAKWOOD COLLEGE	25I	24I	24I	23I	1I	1I	24I	23I
68 LIVINGSTONE COLLEGE	25I	24	22I	21	3I	3	23I	22
69 DILLARD UNIVERSITY	23I	22	20I	19	3I	3	21I	20
70 PAINE COLLEGE	22I	21I	21I	20I	1I	1I	22I	21I
TOTAL, 1ST 70 INSTS.	7,470	6,900	5,523	5,289	1,947	1,611	6,230	5,827
71 SHAW UNIVERSITY	21	21	20	21	1	0	21	21
72 COAHOMA JUNIOR COLLEGE	21I	21	19I	19	2I	2	21I	21
73 PHILANDER SMITH COLLEGE	19	21	11	13	8	8	13	15
74 CLAFLIN COLLEGE	19	21	13	19	6	2	17	20
75 MILES COLLEGE	19	35I	18	29I	1	6I	18	32I
76 LANE COLLEGE	14I	13I	3I	3I	11I	10I	12I	12I
77 MARY HOLMES COLLEGE	14I	13I	14I	13I	0I	0I	14I	13I
78 BARBER-SCOTIA COLLEGE	13I	13	8I	8	5I	5	10I	10
79 STILLMAN COLLEGE	13	17	13	16	0	1	13	16
80 ALLEN UNIVERSITY	13	11	10	9	3	2	11	11
TOTAL, 1ST 80 INSTS.	7,636	7,086	5,652	5,439	1,984	1,647	6,383	6,000
81 UTICA JUNIOR COLLEGE	12I	12	10I	10	2I	2	11I	10
82 JARVIS CHRISTIAN COLLEGE	12I	12	12I	12	0I	0	12I	12
83 PAUL QUINN COLLEGE	12I	12	11I	11	1I	1	11I	11
84 MORRIS COLLEGE	11I	11I	11I	11I	0I	0I	11I	11I
85 EDWARD WATERS COLLEGE	11I	11I	11I	11I	0I	0I	11I	11I
86 TEXAS COLLEGE	11I	11I	11I	11I	0I	0I	11I	11I
87 RUST COLLEGE	11	18	11	17	0	1	11	18
88 WILEY COLLEGE	10I	10I	10I	10I	0I	0I	10I	10I
89 DENMARK TECHNICAL COLLEGE	10I	10	10I	10	0I	0	10I	10
90 SELMA UNIVERSITY	9I	11	8I	10	1I	1	8I	10
TOTAL, 1ST 90 INSTS.	7,745	7,204	5,757	5,552	1,988	1,652	6,490	6,115
91 VOORHEES COLLEGE	8I	8I	7I	7I	1I	1I	7I	7I
92 BISHOP COLLEGE	7	39I	5	39I	2	0I	7	39I
93 MORRISTOWN COLLEGE	6	7	5	4	1	3	6	7
94 PRENTISS NORM & IND INST	4I	4I	2I	2I	2I	2I	4I	4I
95 SOUTHWESTN CHRISTIAN COL	4	4	4	4	0	0	4	4
96 HARRIS STONE STATE COL	0I	0I	0I	0I	0I	0I	0I	0I
TOTAL, 1ST 96 INSTS.	7,774	7,266	5,780	5,608	1,994	1,658	6,518	6,176
TOTAL, ALL OTHER INSTS.	0	3	0	3	0	0	0	3

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-75. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND INSTITUTIONAL CATEGORY: JANUARY 1983

FIELD	INSTITUTIONAL CATEGORY 1/				
	DOCTORATE GRANTING	COMPREHENSIVE	GENERAL BACCALAUREATE	PROFESSIONAL AND SPECIALIZED	2-YEAR
TOTAL	180,523	65,075	26,695	34,817	51,714
ENGINEERS	20,597	6,300	950	3,519	6,330
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	812	108	47	231	132
CHEMICAL ENGINEERS	1,673	376	42	209	117
CIVIL ENGINEERS	3,477	1,163	199	535	1,001
ELECTRICAL ENGINEERS	4,514	1,743	256	1,050	2,035
MECHANICAL ENGINEERS	3,103	1,433	190	678	1,327
OTHER ENGINEERS	7,018	1,477	216	816	1,718
PHYSICAL SCIENTISTS	15,497	7,616	4,038	1,735	5,774
ASTRONOMERS	701	119	65	8	178
CHEMISTS	7,357	4,268	2,519	874	3,224
PHYSICISTS	6,607	2,969	1,325	761	1,889
OTHER PHYSICAL SCIENTISTS	832	260	129	92	483
ENVIRONMENTAL SCIENTISTS	5,612	2,302	727	547	956
ATMOSPHERIC SCIENTISTS	768	89	47	107	53
EARTH SCIENTISTS	3,339	1,768	531	163	730
OCEANOGRAPHERS	1,116	232	52	213	66
OTHER ENVIRONMENTAL SCIENTISTS	389	213	97	64	107
MATHEMATICAL AND COMPUTER SCIENTISTS	13,696	11,486	5,013	1,899	13,545
MATHEMATICIANS	9,095	7,902	3,705	1,196	9,405
COMPUTER SCIENTISTS	4,601	3,584	1,308	703	4,140
LIFE SCIENTISTS	94,476	16,011	5,663	24,504	10,870
AGRICULTURAL SCIENTISTS	12,756	2,045	454	95	1,249
BIOLOGICAL SCIENTISTS	25,355	7,492	3,678	5,815	5,541
MEDICAL SCIENTISTS	51,096	3,915	483	17,584	1,837
OTHER LIFE SCIENTISTS	5,269	2,559	1,048	1,010	2,243
PSYCHOLOGISTS	7,840	6,639	3,116	1,047	5,053
SOCIAL SCIENTISTS	22,805	14,721	7,188	1,566	9,186
ECONOMISTS	6,599	4,325	2,154	450	2,022
POLITICAL SCIENTISTS	4,565	3,408	1,645	313	1,872
SOCIOLOGISTS	4,908	3,874	2,259	370	2,769
OTHER SOCIAL SCIENTISTS	6,733	3,114	1,130	433	2,523

1/ DATA SHOWN FOR DOCTORATE-GRANTING INSTITUTIONS IN THIS NCES CLASSIFICATION OF INSTITUTIONS DIFFERS FROM THE CLASSIFICATION USED ELSEWHERE IN THIS REPORT. SEE TECHNICAL NOTES.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-76. -- FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND INSTITUTIONAL CATEGORY: JANUARY 1983

FIELD	INSTITUTIONAL CATEGORY 1/				
	DOCTORATE GRANTING	COMPREHENSIVE	GENERAL BACCALAUREATE	PROFESSIONAL AND SPECIALIZED	2-YEAR
TOTAL	148,160	48,924	20,245	26,634	28,992
ENGINEERS	17,349	4,337	719	2,894	3,517
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	711	70	36	201	73
CHEMICAL ENGINEERS	1,371	306	33	166	76
CIVIL ENGINEERS	2,933	864	151	421	620
ELECTRICAL ENGINEERS	3,915	1,096	192	837	1,131
MECHANICAL ENGINEERS	2,648	969	139	573	788
OTHER ENGINEERS	5,771	1,032	168	696	829
PHYSICAL SCIENTISTS	13,652	6,155	3,331	1,550	3,688
ASTRONOMERS	635	92	38	7	86
CHEMISTS	6,332	3,502	2,098	779	2,037
PHYSICISTS	5,967	2,370	1,099	682	1,269
OTHER PHYSICAL SCIENTISTS	718	191	96	82	296
ENVIRONMENTAL SCIENTISTS	5,059	1,918	590	474	647
ATMOSPHERIC SCIENTISTS	676	54	32	103	22
EARTH SCIENTISTS	3,000	1,486	439	127	522
OCEANOGRAPHERS	1,031	218	46	184	41
OTHER ENVIRONMENTAL SCIENTISTS	352	160	73	60	62
MATHEMATICAL AND COMPUTER SCIENTISTS	11,192	7,692	3,449	1,423	6,137
MATHEMATICIANS	7,401	5,458	2,662	912	4,605
COMPUTER SCIENTISTS	3,791	2,234	787	511	1,532
LIFE SCIENTISTS	75,781	12,750	4,599	18,348	7,390
AGRICULTURAL SCIENTISTS	11,793	1,904	406	89	845
BIOLOGICAL SCIENTISTS	22,503	6,348	3,067	5,199	3,786
MEDICAL SCIENTISTS	37,218	2,582	317	12,371	1,158
OTHER LIFE SCIENTISTS	4,267	1,916	809	689	1,601
PSYCHOLOGISTS	6,335	4,915	2,191	695	2,652
SOCIAL SCIENTISTS	18,792	11,157	5,366	1,250	4,961
ECONOMISTS	5,570	3,074	1,578	355	977
POLITICAL SCIENTISTS	3,756	2,666	1,325	251	1,153
SOCIOLOGISTS	3,880	3,086	1,689	294	1,509
OTHER SOCIAL SCIENTISTS	5,586	2,331	774	350	1,322

1/ DATA SHOWN FOR DOCTORATE-GRANTING INSTITUTIONS IN THIS NCES CLASSIFICATION OF INSTITUTIONS DIFFERS FROM THE CLASSIFICATION USED ELSEWHERE IN THIS REPORT. SEE TECHNICAL NOTES.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-77. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD AND INSTITUTIONAL CATEGORY: JANUARY 1983

FIELD	INSTITUTIONAL CATEGORY 1/				
	DOCTORATE GRANTING	COMPREHENSIVE	GENERAL BACCALAUREATE	PROFESSIONAL AND SPECIALIZED	2-YEAR
TOTAL	32,363	16,151	6,450	8,183	22,722
ENGINEERS	3,248	1,963	231	625	2,813
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	101	38	11	30	59
CHEMICAL ENGINEERS	302	70	9	43	41
CIVIL ENGINEERS	544	299	48	114	381
ELECTRICAL ENGINEERS	599	647	64	213	904
MECHANICAL ENGINEERS	455	464	51	106	539
OTHER ENGINEERS	1,247	445	48	120	889
PHYSICAL SCIENTISTS	1,845	1,461	707	185	2,086
ASTRONOMERS	66	27	27	1	92
CHEMISTS	1,025	766	421	95	1,187
PHYSICISTS	640	599	226	79	620
OTHER PHYSICAL SCIENTISTS	114	69	33	10	187
ENVIRONMENTAL SCIENTISTS	553	384	137	73	309
ATMOSPHERIC SCIENTISTS	92	35	15	4	31
EARTH SCIENTISTS	339	282	92	36	208
OCEANOGRAPHERS	85	14	6	29	25
OTHER ENVIRONMENTAL SCIENTISTS	37	53	24	4	45
MATHEMATICAL AND COMPUTER SCIENTISTS	2,504	3,794	1,564	476	7,408
MATHEMATICIANS	1,694	2,444	1,043	284	4,800
COMPUTER SCIENTISTS	810	1,350	521	192	2,608
LIFE SCIENTISTS	18,695	3,261	1,044	6,156	3,480
AGRICULTURAL SCIENTISTS	963	141	48	6	404
BIOLOGICAL SCIENTISTS	2,852	1,144	611	616	1,755
MEDICAL SCIENTISTS	13,878	1,333	146	5,213	679
OTHER LIFE SCIENTISTS	1,002	643	239	321	642
PSYCHOLOGISTS	1,505	1,724	925	352	2,401
SOCIAL SCIENTISTS	4,013	3,564	1,822	316	4,225
ECONOMISTS	1,029	1,251	576	95	1,045
POLITICAL SCIENTISTS	809	742	320	62	719
SOCIOLOGISTS	1,028	788	570	76	1,260
OTHER SOCIAL SCIENTISTS	1,147	783	356	83	1,201

1/ DATA SHOWN FOR DOCTORATE-GRANTING INSTITUTIONS IN THIS NCES CLASSIFICATION OF INSTITUTIONS DIFFERS FROM THE CLASSIFICATION USED ELSEWHERE IN THIS REPORT. SEE TECHNICAL NOTES.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-78. — SCIENTISTS AND ENGINEERS EMPLOYED AT FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	13,281	13,917	14,821	15,080	15,296	15,141	15,099
ENGINEERS	5,985	6,365	6,627	6,515	6,609	6,558	6,538
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	207	208	222	240	247	244	243
CHEMICAL ENGINEERS	238	270	282	276	297	285	275
CIVIL ENGINEERS	168	217	151	211	227	243	248
ELECTRICAL ENGINEERS	2,632	2,729	2,718	2,229	2,301	2,252	2,246
MECHANICAL ENGINEERS	1,424	1,572	1,690	1,586	1,590	1,560	1,595
OTHER ENGINEERS	1,316	1,369	1,561	1,973	1,947	1,974	1,991
PHYSICAL SCIENTISTS	4,835	5,002	5,379	5,620	5,512	5,450	5,435
ASTRONOMERS 2/	-	-	-	152	151	140	154
CHEMISTS	1,215	1,382	1,414	1,454	1,423	1,411	1,373
PHYSICISTS	3,037	3,080	3,394	3,463	3,503	3,473	3,484
OTHER PHYSICAL SCIENTISTS	583	540	571	551	435	426	422
ENVIRONMENTAL SCIENTISTS	350	397	507	709	853	768	749
ATMOSPHERIC SCIENTISTS	183	194	173	101	217	171	197
EARTH SCIENTISTS	161	189	315	294	297	261	239
OCEANOGRAPHERS	6	14	19	16	26	22	19
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	298	313	314	294
MATHEMATICAL AND COMPUTER SCIENTISTS	1,357	1,372	1,465	1,383	1,444	1,522	1,526
MATHEMATICIANS	666	651	770	678	702	720	705
COMPUTER SCIENTISTS	691	721	695	705	742	802	821
LIFE SCIENTISTS	643	658	706	727	754	740	753
AGRICULTURAL SCIENTISTS	6	0	0	1	5	4	3
BIOLOGICAL SCIENTISTS	537	561	610	498	523	540	552
MEDICAL SCIENTISTS	100	97	96	94	70	56	63
OTHER LIFE SCIENTISTS 2/	-	-	-	134	156	140	135
PSYCHOLOGISTS	9	19	17	5	9	4	6
SOCIAL SCIENTISTS	102	104	120	121	115	99	92
ECONOMISTS	45	57	61	83	73	64	58
POLITICAL SCIENTISTS	15	8	9	13	14	12	14
SOCIOLOGISTS	4	1	4	1	5	4	3
OTHER SOCIAL SCIENTISTS	38	38	46	24	23	19	15

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-79. — MALE FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	12,370	13,005	13,780	13,759	13,765	13,522	13,511
ENGINEERS	5,899	6,269	6,518	6,306	6,301	6,234	6,200
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	206	206	220	234	232	229	228
CHEMICAL ENGINEERS	229	261	275	258	273	261	253
CIVIL ENGINEERS	166	215	148	202	219	223	240
ELECTRICAL ENGINEERS	2,402	2,705	2,687	2,169	2,217	2,157	2,142
MECHANICAL ENGINEERS	1,406	1,550	1,667	1,557	1,529	1,501	1,475
OTHER ENGINEERS	1,290	1,332	1,521	1,886	1,831	1,853	1,862
PHYSICAL SCIENTISTS	4,509	4,661	4,980	5,195	5,062	4,970	4,981
ASTRONOMERS 2/	-	-	-	139	141	131	144
CHEMISTS	1,103	1,256	1,278	1,286	1,253	1,235	1,209
PHYSICISTS	2,882	2,941	3,230	3,262	3,265	3,214	3,240
OTHER PHYSICAL SCIENTISTS	524	464	472	508	403	390	388
ENVIRONMENTAL SCIENTISTS	316	361	460	601	726	636	608
ATMOSPHERIC SCIENTISTS	167	183	161	98	191	152	170
EARTH SCIENTISTS	144	166	283	244	249	212	189
OCEANOGRAPHERS	5	12	16	15	22	20	17
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	244	264	252	232
MATHEMATICAL AND COMPUTER SCIENTISTS	1,100	1,122	1,168	1,045	1,065	1,100	1,136
MATHEMATICIANS	557	550	605	536	542	543	549
COMPUTER SCIENTISTS	543	572	563	529	523	557	587
LIFE SCIENTISTS	495	492	535	482	512	501	505
AGRICULTURAL SCIENTISTS	2	0	0	0	5	3	7
BIOLOGICAL SCIENTISTS	375	417	477	329	345	368	372
MEDICAL SCIENTISTS	78	75	58	68	54	42	48
OTHER LIFE SCIENTISTS 2/	-	-	-	85	106	88	78
PSYCHOLOGISTS	7	16	15	5	6	3	3
SOCIAL SCIENTISTS	84	84	104	105	93	78	78
ECONOMISTS	36	45	53	75	63	53	53
POLITICAL SCIENTISTS	14	8	9	12	13	11	13
SOCIOLOGISTS	2	0	3	0	2	2	2
OTHER SOCIAL SCIENTISTS	32	31	39	18	15	12	10

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-80. — FEMALE FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD: JANUARY 1976 - JANUARY 1983 1/

FIELD	1976	1977	1978	1980	1981	1982	1983
TOTAL	637	710	820	947	1,028	1,073	1,060
ENGINEERS	49	65	79	163	173	184	185
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1	2	2	6	6	6	6
CHEMICAL ENGINEERS	5	6	5	14	17	15	13
CIVIL ENGINEERS	0	1	3	4	5	7	4
ELECTRICAL ENGINEERS	15	14	21	41	46	51	58
MECHANICAL ENGINEERS	10	16	19	23	22	23	22
OTHER ENGINEERS	18	26	29	75	78	82	82
PHYSICAL SCIENTISTS	182	249	300	258	269	278	272
ASTRONOMERS 2/	-	-	-	9	9	7	9
CHEMISTS	74	107	104	116	122	131	124
PHYSICISTS	79	89	107	108	118	123	123
OTHER PHYSICAL SCIENTISTS	29	53	89	25	20	17	16
ENVIRONMENTAL SCIENTISTS	27	27	37	75	92	89	99
ATMOSPHERIC SCIENTISTS	11	8	9	2	16	15	21
EARTH SCIENTISTS	15	17	25	29	29	26	27
OCEANOGRAPHERS	1	2	3	1	3	2	2
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	43	44	46	49
MATHEMATICAL AND COMPUTER SCIENTISTS	215	219	251	250	277	314	290
MATHEMATICIANS	88	88	153	122	125	144	126
COMPUTER SCIENTISTS	127	131	98	128	152	170	164
LIFE SCIENTISTS	150	133	140	193	201	195	202
AGRICULTURAL SCIENTISTS	0	0	0	1	0	1	0
BIOLOGICAL SCIENTISTS	135	120	110	139	150	140	147
MEDICAL SCIENTISTS	15	13	30	11	9	10	13
OTHER LIFE SCIENTISTS 2/	-	-	-	42	42	44	42
PSYCHOLOGISTS	2	3	2	0	2	1	2
SOCIAL SCIENTISTS	12	14	11	8	14	12	10
ECONOMISTS	4	6	5	4	4	7	4
POLITICAL SCIENTISTS	1	0	0	1	1	0	2
SOCIOLOGISTS	2	1	0	1	2	1	0
OTHER SOCIAL SCIENTISTS	5	7	6	2	5	4	4

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-81. -- SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD: JANUARY 1983

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES
TOTAL, ALL INSTITUTIONS	15,099	6,538	5,435	749	1,526	753	6	92
1 LOS ALAMOS NATIONAL LAB (UNIV OF CALIFORNIA)	2,876	926	1,478	83	253	133	0	3
2 JET PROPULSION LABORATORY (CALIFORNIA INST OF TECH)	2,739E	1,984	438	34	255	28	0	0
3 LAWRENCE LIVERMORE LAB (UNIV OF CALIFORNIA)	2,713	1,088	1,020	107	417	81	0	0
4 ARGONNE NATL LABORATORY (UNIV OF CHICAGO)	1,979E	778	743	171	89	184	0	14
5 LINCOLN LABORATORY (MASS INST OF TECHNOLOGY)	1,085	762	210	0	112	0	1	0
6 BROOKHAVEN NAT'L LAB (AUI) 1/	1,036	311	414	33	89	179	0	10
7 LAWRENCE BERKELEY LAB (UNIV OF CALIFORNIA)	738	92	343	142	58	103	0	0
8 FERMI NAT ACCELERATOR LAB (URA) 2/	375	114	255	0	6	0	0	0
9 NATL CTR ATMOSPHERIC RES (UCAR) 3/	304	55	0	171	80	0	0	0
10 STFRD LINEAR ACCELRTR CTR (STANFORD UNIVERSITY)	271E	117	130	0	24	0	0	0
TOTAL, 1ST 10 INSTS.	14,118	6,227	5,031	741	1,383	708	1	27
11 PLASMA PHYSICS LABORATORY (PRINCETON UNIV)	263E	148	97	0	18	0	0	0
12 CENTER FOR NAVAL ANALYSES (UNIV OF ROCHESTER)	177E	24	55	0	55	2	2	39
13 AMES LABORATORY (IOWA STATE UNIV OF S&T)	156	47	98	0	10	1	0	0
14 OAK RIDGE INST NUCLR STDS (ORAU) 5/	135	13	36	3	12	42	3	26
15 NAT'L RADIO ASTRONOMY OBS (AUI) 1/	106	42	41	0	23	0	0	0
16 KITT PEAK NAT'L OBSERVTRY (AURA) 4/	72	21	36	0	15	0	0	0
17 NAT'L ASTRON & IONOS CTR (CORNELL UNIVERSITY)	36	15	13	5	3	0	0	0
18 SACRAMENTO PEAK OBSERVTRY (AURA) 4/	23	1	17	0	5	0	0	0
19 CERRO TOLOLO INTER-AM OBS (AURA) 4/	13	0	11	0	2	0	0	0
TOTAL, 1ST 19 INSTS.	15,099	6,538	5,435	749	1,526	753	6	92

1/ ASSOCIATED UNIVERSITIES, INC.
2/ UNIVERSITIES RESEARCH ASSOCIATION
3/ UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH
4/ ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.
5/ OAK RIDGE ASSOCIATED UNIVERSITIES

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

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TABLE A1A

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
ALL UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	172194	168549	151747	148627	20447	19922
FIRST PROFESSIONAL	2220	54171	53046	37172	37177	16999	15869
MASTER'S	2230	94044	91088	60722	59138	33322	31950
BACHELOR'S OR THE EQUIVALENT	2240	38415	36627	23314	22829	15101	13798
TOTAL	2200	358824	349310	272955	267771	85869	81539

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	28816	27950	8880	8385	27803	27090	8431	8027	1013	860	449	358
AERONAUTICAL & ASTRONAUTICAL	2611	1091	1084	239	239	1068	1064	226	229	23	20	13	10
CHEMICAL ENGINEERS	2612	1952	1910	465	353	1856	1820	425	327	96	90	40	26
CIVIL ENGINEERS	2613	4989	4739	1386	1352	4779	4572	1311	1287	210	167	75	65
ELECTRICAL ENGINEERS	2614	7171	6789	2427	2247	7004	6657	2352	2186	167	132	75	61
MECHANICAL ENGINEERS	2615	5117	5038	1614	1599	5019	4948	1561	1548	98	90	53	51
OTHER ENGINEERS	2616	8496	8390	2749	2595	8077	8029	2556	2450	419	361	193	145
PHYSICAL SCIENTISTS (TOTAL)	2620	28376	28538	6284	5925	25692	25889	4916	4602	2684	2649	1368	1323
ASTRONOMERS	2621	858	1006	213	197	792	932	184	166	66	74	29	31
CHEMISTS	2622	14748	14625	3494	3403	12798	12728	2451	2418	1950	1897	1043	985
PHYSICISTS	2623	11387	11425	2164	1843	10863	10915	1947	1651	524	510	217	192
OTHER PHYSICAL SCIENTISTS	2624	1383	1482	413	482	1239	1314	334	367	144	168	79	115
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	8688	8668	1456	1527	7867	7853	1150	1192	821	815	306	335
ATMOSPHERIC SCIENTISTS	2631	887	762	177	124	817	712	154	114	70	50	23	10
EARTH SCIENTISTS	2632	5574	5664	957	1014	5113	5214	756	798	461	450	201	216
OCEANOGRAPHERS	2633	1520	1484	159	156	1317	1273	118	119	203	211	41	37
OTHER ENVIRONMENTAL SCIENTISTS	2634	707	758	163	233	620	654	122	161	87	104	41	72
MATHEMATICAL SCIENTISTS (TOTAL)	2640	29893	28380	15746	13917	24590	23503	11450	10130	5303	4877	4296	3787
MATHEMATICIANS	2641	21038	20566	10265	9377	17343	17044	6929	6302	3695	3522	3336	3075
COMPUTER SCIENTISTS	2642	8855	7814	5481	4540	7247	6459	4521	3828	1608	1355	960	712
LIFE SCIENTISTS (TOTAL)	2650	118868	115711	32656	30626	87971	86780	23151	22048	30897	28931	9505	8578
AGRICULTURAL SCIENTISTS	2651	15037	14663	1562	1782	13468	13197	1192	1402	1569	1466	370	380
BIOLOGICAL SCIENTISTS	2652	40903	40159	6978	6580	31414	31049	4261	4077	9489	9110	2717	2503
MEDICAL SCIENTISTS	2653	53646	53085	21269	19902	40338	39926	16690	15634	13308	13159	4579	4268
OTHER LIFE SCIENTISTS	2654	9282	7804	2847	2362	2751	2608	1008	935	6531	5196	1839	1427
PSYCHOLOGISTS (TOTAL)	2660	16788	16796	6907	6901	12337	12348	4156	4125	4451	4448	2751	2776
SOCIAL SCIENTISTS (TOTAL)	2670	41526	41728	13940	14258	33615	33631	10163	10317	7911	8097	3777	3941
ECONOMISTS	2671	11554	11453	3996	4002	10341	10254	3459	3449	1213	1199	537	553
POLITICAL SCIENTISTS	2672	9151	9173	2652	2659	7903	7894	2117	2112	1248	1279	535	547
SOCIOLOGISTS	2673	10458	10762	3722	3876	7598	7734	2235	2333	2860	3028	1487	1543
OTHER SOCIAL SCIENTISTS	2674	10363	10340	3570	3721	7773	7746	2352	2423	2590	2591	1218	1298
TOTAL	2600	272955	267771	85869	81539	219875	217094	63417	60441	53080	50677	22452	21098

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	37696	36335	28816	27950	8880	8385	32050.	31004.	7055.	6724.	22.0	21.7
AERONAUTICAL & ASTRONAUTICAL	2711	1330	1323	1091	1084	239	239	1159.	1160.	324.	314.	28.0	27.1
CHEMICAL ENGINEERS	2712	2417	2263	1952	1910	465	353	2115.	2032.	531.	458.	25.1	22.5
CIVIL ENGINEERS	2713	6375	6091	4989	4739	1386	1352	5534.	5253.	770.	782.	13.9	14.9
ELECTRICAL ENGINEERS	2714	9598	9036	7171	6789	2427	2247	8043.	7588.	1905.	1730.	23.7	22.7
MECHANICAL ENGINEERS	2715	6731	6637	5117	5038	1614	1599	5691.	5585.	893.	862.	15.7	15.4
OTHER ENGINEERS	2716	11245	10985	8496	8390	2749	2595	9509.	9386.	2631.	2588.	27.7	27.6
PHYSICAL SCIENTISTS (TOTAL)	2720	34660	34463	28376	28538	6284	5925	31070.	31155.	7059.	7304.	22.7	23.4
ASTRONOMERS	2721	1071	1203	858	1006	213	197	933.	1047.	382.	408.	40.9	39.0
CHEMISTS	2722	18242	18028	14748	14625	3494	3403	16298.	16172.	3060.	3111.	18.8	19.2
PHYSICISTS	2723	13551	13268	11387	11425	2164	1843	12273.	12221.	3044.	3080.	24.8	25.2
OTHER PHYSICAL SCIENTISTS	2724	1796	1964	1383	1482	413	482	1566.	1715.	572.	705.	36.5	41.1
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	10144	10195	8688	8668	1456	1527	9339.	9299.	3033.	2995.	32.5	32.2
ATMOSPHERIC SCIENTISTS	2731	1064	886	887	762	177	124	970.	814.	545.	399.	56.2	49.0
EARTH SCIENTISTS	2732	6531	6678	5574	5664	957	1014	6003.	6059.	1299.	1406.	21.6	23.2
OCEANOGRAPHERS	2733	1679	1640	1520	1484	159	156	1591.	1569.	954.	930.	60.0	59.3
OTHER ENVIRONMENTAL SCIENTISTS	2734	870	991	707	758	163	233	775.	856.	235.	261.	30.3	30.5
MATHEMATICAL SCIENTISTS (TOTAL)	2740	45639	42297	29893	28380	15746	13917	36207.	34060.	2195.	2148.	6.1	6.3
MATHEMATICIANS	2741	31303	29943	21038	20566	10265	9377	25315.	24529.	1302.	1354.	5.1	5.5
COMPUTER SCIENTISTS	2742	14336	12354	8855	7814	5481	4540	10892.	9532.	893.	794.	8.2	8.3
LIFE SCIENTISTS (TOTAL)	2750	151524	146337	118868	115711	32656	30626	130581.	127651.	35847.	35227.	27.5	27.6
AGRICULTURAL SCIENTISTS	2751	16599	16445	15037	14663	1562	1782	15835.	15532.	6560.	6595.	41.4	42.5
BIOLOGICAL SCIENTISTS	2752	47881	46739	40903	40159	6978	6580	43903.	42665.	13106.	12680.	29.9	29.7
MEDICAL SCIENTISTS	2753	74915	72987	53646	53085	21269	19902	60645.	60824.	15482.	15329.	25.5	25.2
OTHER LIFE SCIENTISTS	2754	12129	10166	9282	7804	2847	2362	10198.	8629.	698.	623.	6.8	7.2
PSYCHOLOGISTS (TOTAL)	2760	23695	23697	16788	16796	6907	6901	19367.	19440.	1463.	1479.	7.6	7.6
SOCIAL SCIENTISTS (TOTAL)	2770	55466	55986	41526	41728	13940	14258	46833.	47096.	3614.	3594.	7.7	7.6
ECONOMISTS	2771	15550	15455	11554	11453	3996	4002	13066.	12967.	1197.	1240.	9.2	9.6
POLITICAL SCIENTISTS	2772	11803	11832	9151	9173	2652	2659	10156.	10222.	662.	623.	6.5	6.1
SOCIOLOGISTS	2773	14180	14638	10458	10762	3722	3876	11894.	12277.	641.	702.	5.4	5.7
OTHER SOCIAL SCIENTISTS	2774	13933	14061	10363	10340	3570	3721	11717.	11630.	1114.	1029.	9.5	8.8
TOTAL	2700	358824	349310	272955	267771	85869	81539	305446.	299705.	60266.	59472.	19.7	19.8

TABLE A1B

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PUBLIC UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	115959	113784	103889	102132	12070	11652
FIRST PROFESSIONAL	2220	27921	27706	19820	19846	8101	7860
MASTER'S	2230	72123	70272	48602	47576	23521	22696
BACHELOR'S OR THE EQUIVALENT	2240	30458	29250	18233	17994	12225	11256
TOTAL	2200	246461	241012	190544	187548	55917	53464

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	21159	20557	6302	6126	20390	19898	5958	5843	769	659	344	283
AERONAUTICAL & ASTRONAUTICAL	2611	679	665	147	158	664	652	140	151	15	13	7	7
CHEMICAL ENGINEERS	2612	1392	1369	304	245	1315	1297	286	224	77	72	18	21
CIVIL ENGINEERS	2613	4021	3861	1020	1056	3857	3720	962	1000	164	141	58	56
ELECTRICAL ENGINEERS	2614	4651	4358	1546	1506	4547	4274	1490	1462	104	84	56	44
MECHANICAL ENGINEERS	2615	3711	3629	1076	1070	3644	3562	1033	1030	67	67	43	40
OTHER ENGINEERS	2616	6705	6675	2209	2091	6363	6393	2047	1976	342	282	162	115
PHYSICAL SCIENTISTS (TOTAL)	2620	18667	18703	4224	3959	16971	17040	3319	3094	1696	1663	905	865
ASTRONOMERS	2621	613	765	143	141	567	711	126	120	46	54	17	21
CHEMISTS	2622	9644	9575	2420	2392	8437	8404	1715	1741	1207	1171	705	675
PHYSICISTS	2623	7415	7366	1365	1143	7077	7035	1232	1027	338	331	133	116
OTHER PHYSICAL SCIENTISTS	2624	995	997	296	283	890	890	246	230	105	107	50	53
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	6999	6960	1119	1140	6365	6349	888	904	634	611	231	236
ATMOSPHERIC SCIENTISTS	2631	785	630	151	110	721	593	130	100	64	37	21	10
EARTH SCIENTISTS	2632	4468	4590	704	770	4113	4226	563	609	355	364	141	161
OCEANOGRAPHERS	2633	1162	1138	134	124	1017	995	100	95	145	143	34	29
OTHER ENVIRONMENTAL SCIENTISTS	2634	584	602	130	136	514	535	95	100	70	67	35	36
MATHEMATICAL SCIENTISTS (TOTAL)	2640	22170	21113	11486	10121	18140	17421	8216	7233	4030	3692	3270	2888
MATHEMATICIANS	2641	15567	15230	7548	6943	12802	12600	4978	4573	2765	2630	2570	2370
COMPUTER SCIENTISTS	2642	6603	5883	3938	3178	5338	4821	3238	2660	1265	1062	700	518
LIFE SCIENTISTS (TOTAL)	2650	80059	78355	19843	19027	58833	53326	13341	13166	21226	20029	6502	5861
AGRICULTURAL SCIENTISTS	2651	14413	14070	1513	1703	12910	12654	1152	1336	1503	1416	361	367
BIOLOGICAL SCIENTISTS	2652	26721	26385	4643	4395	20743	20600	2854	2733	5978	5785	1789	1662
MEDICAL SCIENTISTS	2653	31724	31848	11550	11120	22950	23072	8546	8360	8774	8776	3004	2760
OTHER LIFE SCIENTISTS	2654	7201	6052	2137	1809	2230	2000	789	737	4971	4052	1348	1072
PSYCHOLOGISTS (TOTAL)	2660	11761	11891	4093	4078	8691	8749	2410	2375	3070	3142	1683	1703
SOCIAL SCIENTISTS (TOTAL)	2670	29729	29969	8850	9013	24110	24197	6361	6427	5619	5772	2489	2586
ECONOMISTS	2671	7799	7774	2283	2303	6996	6959	1951	1948	803	815	332	355
POLITICAL SCIENTISTS	2672	6214	6183	1524	1522	5376	5323	1202	1194	838	860	322	328
SOCIOLOGISTS	2673	7424	7657	2432	2383	5434	5560	1456	1449	1990	2097	976	934
OTHER SOCIAL SCIENTISTS	2674	8292	8355	2611	2805	6304	6355	1752	1836	1988	2000	859	969
TOTAL	2600	190544	187548	55917	53464	153500	151980	40493	39042	37044	35568	15424	14422

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	27461	26683	21159	20557	6302	6126	23606.	22853.	4006.	3878.	17.0	17.0
AERONAUTICAL & ASTRONAUTICAL	2711	826	823	679	665	147	158	724.	707.	141.	121.	19.5	17.1
CHEMICAL ENGINEERS	2712	1696	1614	1392	1369	304	245	1512.	1451.	341.	294.	22.6	20.3
CIVIL ENGINEERS	2713	5041	4917	4021	3861	1020	1056	4438.	4273.	544.	588.	12.3	13.8
ELECTRICAL ENGINEERS	2714	6197	5864	4651	4358	1546	1506	5253.	4917.	755.	620.	14.4	12.6
MECHANICAL ENGINEERS	2715	4787	4699	3711	3629	1076	1070	4117.	4016.	462.	444.	11.2	11.1
OTHER ENGINEERS	2716	8914	8766	6705	6675	2209	2091	7562.	7490.	1762.	1810.	23.3	24.2
PHYSICAL SCIENTISTS (TOTAL)	2720	22891	22662	18667	18703	4224	3959	20513.	20401.	4100.	4072.	20.0	20.0
ASTRONOMERS	2721	756	906	613	765	143	141	662.	786.	260.	296.	39.3	37.7
CHEMISTS	2722	12064	11967	9644	9575	2420	2392	10732.	10630.	1787.	1716.	16.7	16.1
PHYSICISTS	2723	8780	8509	7415	7366	1365	1143	7988.	7837.	1643.	1586.	20.6	20.2
OTHER PHYSICAL SCIENTISTS	2724	1291	1280	995	997	296	283	1131.	1148.	410.	474.	36.3	41.3
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	8118	8100	6999	6960	1119	1140	7484.	7406.	2373.	2289.	31.7	30.9
ATMOSPHERIC SCIENTISTS	2731	936	740	785	630	151	110	859.	674.	489.	331.	56.9	49.1
EARTH SCIENTISTS	2732	5172	5360	4468	4590	704	770	4771.	4865.	1013.	1116.	21.2	22.9
OCEANOGRAPHERS	2733	1296	1262	1162	1138	134	124	1219.	1204.	668.	637.	54.8	52.9
OTHER ENVIRONMENTAL SCIENTISTS	2734	714	738	584	602	130	136	635.	663.	203.	205.	32.0	30.9
MATHEMATICAL SCIENTISTS (TOTAL)	2740	33656	31234	22170	21113	11486	10121	26715.	25176.	1167.	1129.	4.4	4.5
MATHEMATICIANS	2741	23115	22173	15567	15230	7548	6943	18706.	18148.	643.	647.	3.4	3.6
COMPUTER SCIENTISTS	2742	10541	9061	6603	5883	3938	3178	8009.	7028.	524.	482.	6.5	6.9
LIFE SCIENTISTS (TOTAL)	2750	99902	97382	80059	78355	19843	19027	86973.	85415.	23803.	22755.	27.4	26.6
AGRICULTURAL SCIENTISTS	2751	15926	15773	14413	14070	1513	1703	15183.	14891.	6349.	6384.	41.8	42.9
BIOLOGICAL SCIENTISTS	2752	31364	30780	26721	26385	4643	4395	28647.	28088.	7795.	7360.	27.2	26.2
MEDICAL SCIENTISTS	2753	43274	42968	31724	31848	11550	11120	35310.	35786.	9192.	8644.	26.0	24.2
OTHER LIFE SCIENTISTS	2754	9338	7861	7201	6052	2137	1809	7832.	6649.	468.	367.	6.0	5.5
PSYCHOLOGISTS (TOTAL)	2760	15854	15969	11761	11891	4093	4078	13274.	13388.	865.	923.	6.5	6.9
SOCIAL SCIENTISTS (TOTAL)	2770	38579	38982	29729	29969	8850	9013	33045.	33217.	2549.	2549.	7.7	7.7
ECONOMISTS	2771	10082	10077	7799	7774	2283	2303	8643.	8609.	900.	923.	10.4	10.7
POLITICAL SCIENTISTS	2772	7738	7705	6214	6183	1524	1522	6813.	6792.	416.	395.	6.1	5.8
SOCIOLOGISTS	2773	9856	10040	7424	7657	2432	2383	8332.	8563.	446.	496.	5.4	5.8
OTHER SOCIAL SCIENTISTS	2774	10903	11160	8292	8355	2611	2805	9257.	9252.	786.	734.	8.5	7.9
TOTAL	2700	246461	241012	190544	187548	55917	53464	211610.	207856.	38863.	37594.	18.4	18.1

TABLE A1C

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PRIVATE UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	56235	54765	47858	46495	8377	8270
FIRST PROFESSIONAL	2220	26250	25340	17352	17331	8898	8009
MASTER'S	2230	21921	20816	12120	11562	9801	9254
BACHELOR'S OR THE EQUIVALENT	2240	7957	7377	5081	4835	2876	2542
TOTAL	2200	112363	108298	82411	80223	29952	28075

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	7657	7393	2578	2259	7413	7192	2473	2184	244	201	105	75
AERONAUTICAL & ASTRONAUTICAL	2611	412	419	92	81	404	412	86	78	8	7	6	3
CHEMICAL ENGINEERS	2612	560	541	161	108	541	523	139	103	19	18	22	5
CIVIL ENGINEERS	2613	968	878	366	296	922	852	349	287	46	26	17	9
ELECTRICAL ENGINEERS	2614	2520	2431	881	741	2457	2383	862	724	63	48	19	17
MECHANICAL ENGINEERS	2615	1406	1409	538	529	1375	1386	528	518	31	23	10	11
OTHER ENGINEERS	2616	1791	1715	540	504	1714	1636	509	474	77	79	31	30
PHYSICAL SCIENTISTS (TOTAL)	2620	9709	9835	2060	1966	8721	8849	1597	1508	988	986	463	458
ASTRONOMERS	2621	245	241	70	56	225	221	58	46	20	20	12	10
CHEMISTS	2622	5104	5050	1074	1011	4361	4324	736	701	743	726	338	310
PHYSICISTS	2623	3972	4059	799	700	3786	3880	715	624	186	179	84	76
OTHER PHYSICAL SCIENTISTS	2624	388	485	117	199	349	424	88	137	39	61	29	62
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1689	1708	337	387	1502	1504	262	288	187	204	75	99
ATMOSPHERIC SCIENTISTS	2631	102	132	26	14	96	119	24	14	6	13	2	0
EARTH SCIENTISTS	2632	1106	1074	253	244	1000	988	193	189	106	86	60	55
OCEANOGRAPHERS	2633	358	346	25	32	300	278	18	24	58	68	7	8
OTHER ENVIRONMENTAL SCIENTISTS	2634	123	156	33	97	106	119	27	61	17	37	6	36
MATHEMATICAL SCIENTISTS (TOTAL)	2640	7723	7267	4260	3796	6450	6082	3234	2897	1273	1185	1026	899
MATHEMATICIANS	2641	5471	5336	2717	2434	4541	4444	1951	1729	930	892	766	705
COMPUTER SCIENTISTS	2642	2252	1931	1543	1362	1909	1638	1283	1168	343	293	260	194
LIFE SCIENTISTS (TOTAL)	2650	38809	37356	12813	11599	29138	28456	9810	8882	9671	8902	3003	2717
AGRICULTURAL SCIENTISTS	2651	624	593	49	79	558	543	40	66	66	50	9	13
BIOLOGICAL SCIENTISTS	2652	14182	13774	2335	2185	10671	10449	1407	1344	3511	3325	928	841
MEDICAL SCIENTISTS	2653	21922	21237	9719	8782	17338	16854	8144	7274	4534	4383	1575	1508
OTHER LIFE SCIENTISTS	2654	2081	1752	710	553	521	608	219	198	1560	1144	491	355
PSYCHOLOGISTS (TOTAL)	2660	5027	4905	2814	2823	3646	3599	1746	1750	1381	1306	1068	1073
SOCIAL SCIENTISTS (TOTAL)	2670	11797	11759	5090	5245	9505	9434	3802	3890	2292	2325	1288	1355
ECONOMISTS	2671	3755	3679	1713	1699	3345	3295	1508	1501	410	384	205	198
POLITICAL SCIENTISTS	2672	2937	2990	1128	1137	2527	2571	915	918	410	419	213	219
SOCIOLOGISTS	2673	3034	3105	1290	1493	2164	2174	779	884	870	931	511	609
OTHER SOCIAL SCIENTISTS	2674	2071	1985	959	916	1469	1394	600	587	602	591	359	329
TOTAL	2600	82411	80223	29952	28075	66375	65114	22924	21399	16036	15109	7028	6676

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	10235	9652	7657	7393	2578	2259	8443.	8152.	3049.	2846.	36.1	34.9
AERONAUTICAL & ASTRONAUTICAL	2711	504	500	412	419	92	81	435.	454.	183.	192.	42.1	42.3
CHEMICAL ENGINEERS	2712	721	649	560	541	161	108	602.	581.	190.	164.	31.6	28.2
CIVIL ENGINEERS	2713	1334	1174	968	878	366	296	1096.	980.	226.	194.	20.6	19.8
ELECTRICAL ENGINEERS	2714	3401	3172	2520	2431	881	741	2790.	2672.	1150.	1100.	41.2	41.2
MECHANICAL ENGINEERS	2715	1944	1938	1406	1409	538	529	1574.	1569.	431.	418.	27.4	26.6
OTHER ENGINEERS	2716	2331	2219	1791	1715	540	504	1947.	1896.	869.	778.	44.6	41.0
PHYSICAL SCIENTISTS (TOTAL)	2720	11769	11801	9709	9835	2060	1966	10557.	10754.	2959.	3231.	28.0	30.0
ASTRONOMERS	2721	315	297	245	241	70	56	271.	261.	122.	112.	45.0	42.9
CHEMISTS	2722	6178	6061	5104	5050	1074	1011	5566.	5542.	1274.	1395.	22.9	25.2
PHYSICISTS	2723	4771	4759	3972	4059	799	700	4285.	4384.	1401.	1494.	32.7	34.1
OTHER PHYSICAL SCIENTISTS	2724	505	684	388	485	117	199	435.	567.	162.	231.	37.2	40.7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	2026	2095	1689	1708	337	387	1855.	1892.	661.	706.	35.6	37.3
ATMOSPHERIC SCIENTISTS	2731	128	146	102	132	26	14	112.	140.	56.	69.	50.0	49.3
EARTH SCIENTISTS	2732	1359	1318	1106	1074	253	244	1232.	1195.	286.	290.	23.2	24.3
OCEANOGRAPHERS	2733	383	378	358	346	25	32	371.	365.	287.	293.	77.4	80.3
OTHER ENVIRONMENTAL SCIENTISTS	2734	156	253	123	156	33	97	140.	193.	32.	55.	22.9	28.5
MATHEMATICAL SCIENTISTS (TOTAL)	2740	11933	11063	7723	7267	4260	3796	9492.	8884.	1028.	1019.	10.8	11.5
MATHEMATICIANS	2741	8188	7770	5471	5336	2717	2434	6609.	6381.	659.	707.	10.0	11.1
COMPUTER SCIENTISTS	2742	3795	3293	2252	1931	1543	1362	2883.	2503.	369.	312.	12.8	12.5
LIFE SCIENTISTS (TOTAL)	2750	51622	48955	38809	37356	12813	11599	43608.	42236.	12044.	12472.	27.6	29.5
AGRICULTURAL SCIENTISTS	2751	673	672	624	593	49	79	652.	641.	212.	211.	32.5	32.9
BIOLOGICAL SCIENTISTS	2752	16517	15959	14182	13774	2335	2185	15256.	14577.	5311.	5320.	34.8	36.5
MEDICAL SCIENTISTS	2753	31641	30019	21922	21237	9719	8782	25335.	25038.	6290.	6685.	24.8	26.7
OTHER LIFE SCIENTISTS	2754	2791	2305	2081	1752	710	553	2366.	1981.	231.	256.	9.8	12.9
PSYCHOLOGISTS (TOTAL)	2760	7841	7728	5027	4905	2814	2823	6094.	6052.	598.	557.	9.8	9.2
SOCIAL SCIENTISTS (TOTAL)	2770	16887	17004	11797	11759	5090	5245	13788.	13879.	1066.	1046.	7.7	7.5
ECONOMISTS	2771	5468	5378	3755	3679	1713	1699	4423.	4358.	297.	316.	6.7	7.3
POLITICAL SCIENTISTS	2772	4065	4127	2937	2990	1128	1137	3343.	3430.	246.	228.	7.4	6.6
SOCIOLOGISTS	2773	4324	4598	3034	3105	1290	1493	3563.	3714.	194.	206.	5.4	5.5
OTHER SOCIAL SCIENTISTS	2774	3030	2901	2071	1985	959	916	2460.	2378.	328.	295.	13.3	12.4
TOTAL	2700	112363	108298	82411	80223	29952	28075	93837.	91849.	21403.	21877.	22.8	23.8

TABLE A1D

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
DOCTORATE GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	124789	122432	111713	109674	13076	12758
FIRST PROFESSIONAL	2220	52080	51116	36241	36199	15839	14917
MASTER'S	2230	35911	35210	26335	25604	9576	9606
BACHELOR'S OR THE EQUIVALENT	2240	23780	23285	17442	17265	6338	6020
TOTAL	2200	236560	232043	191731	188742	44829	43301

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	21849	21318	4318	4147	21006	20603	4002	3899	843	715	316	248
AERONAUTICAL & ASTRONAUTICAL	2611	867	854	141	134	852	841	133	131	15	13	8	3
CHEMICAL ENGINEERS	2612	1738	1718	360	273	1656	1641	322	251	82	77	38	22
CIVIL ENGINEERS	2613	3678	3493	708	710	3504	3356	650	656	174	137	58	54
ELECTRICAL ENGINEERS	2614	5088	4862	953	882	4951	4752	913	851	137	110	40	31
MECHANICAL ENGINEERS	2615	3538	3505	658	698	3465	3441	631	668	73	64	27	30
OTHER ENGINEERS	2616	6940	6886	1498	1450	6578	6572	1353	1342	362	314	145	108
PHYSICAL SCIENTISTS (TOTAL)	2620	16986	17263	2403	2370	15590	15871	1906	1872	1396	1392	497	498
ASTRONOMERS	2621	676	813	79	79	624	755	65	63	52	58	14	16
CHEMISTS	2622	8151	8099	1297	1325	7206	7188	934	982	945	911	363	343
PHYSICISTS	2623	7363	7398	894	735	7035	7080	799	654	328	318	95	81
OTHER PHYSICAL SCIENTISTS	2624	796	953	133	231	725	848	108	173	71	105	25	58
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	6313	6302	707	829	5702	5682	525	611	611	620	182	218
ATMOSPHERIC SCIENTISTS	2631	819	689	111	71	752	643	89	61	67	46	22	10
EARTH SCIENTISTS	2632	3666	3787	429	531	3363	3484	329	407	303	303	100	124
OCEANOGRAPHERS	2633	1380	1339	116	106	1192	1148	79	75	188	191	37	31
OTHER ENVIRONMENTAL SCIENTISTS	2634	448	487	51	121	395	407	28	68	53	80	23	53
MATHEMATICAL SCIENTISTS (TOTAL)	2640	14586	13935	3826	3537	12521	12006	2856	2682	2065	1929	970	855
MATHEMATICIANS	2641	9630	9444	2509	2344	8418	8270	1775	1674	1212	1174	734	670
COMPUTER SCIENTISTS	2642	4956	4491	1317	1193	4103	3736	1081	1008	853	755	236	185
LIFE SCIENTISTS (TOTAL)	2650	100756	98449	26229	24716	76604	75610	19603	18673	24152	22839	6626	6043
AGRICULTURAL SCIENTISTS	2651	13122	12811	1004	1222	11699	11472	736	949	1423	1339	268	273
BIOLOGICAL SCIENTISTS	2652	30238	29607	3757	3410	23190	22889	2315	2147	7048	6718	1442	1263
MEDICAL SCIENTISTS	2653	51712	51230	19924	18680	39666	39228	15903	14910	12046	12002	4021	3770
OTHER LIFE SCIENTISTS	2654	5684	4801	1544	1404	2049	2021	649	667	3635	2780	895	737
PSYCHOLOGISTS (TOTAL)	2660	8230	8207	2186	2203	6150	6122	1356	1335	2080	2085	830	868
SOCIAL SCIENTISTS (TOTAL)	2670	23011	23268	5160	5499	18651	18769	3533	3737	4360	4499	1627	1762
ECONOMISTS	2671	6820	6828	1479	1516	6138	6161	1254	1296	682	667	225	220
POLITICAL SCIENTISTS	2672	4660	4694	1056	1106	4015	4015	826	845	645	679	230	261
SOCIOLOGISTS	2673	4992	5249	1265	1279	3631	3769	674	676	1361	1480	591	603
OTHER SOCIAL SCIENTISTS	2674	6539	6497	1360	1598	4867	4824	779	920	1672	1673	581	678
TOTAL	2600	191731	188742	44829	43301	156224	154663	33781	32809	35507	34079	11048	10492

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	26167	25465	21849	21318	4318	4147	23290.	22719.	6938.	6607.	29.8	29.1
AERONAUTICAL & ASTRONAUTICAL	2711	1008	988	867	854	141	134	905.	895.	317.	304.	35.0	34.0
CHEMICAL ENGINEERS	2712	2098	1991	1738	1718	360	273	1857.	1804.	524.	452.	28.2	25.1
CIVIL ENGINEERS	2713	4386	4203	3678	3493	708	710	3945.	3745.	754.	758.	19.1	20.2
ELECTRICAL ENGINEERS	2714	6041	5744	5088	4862	953	882	5372.	5121.	1871.	1689.	34.8	33.0
MECHANICAL ENGINEERS	2715	4196	4203	3538	3505	658	698	3735.	3716.	864.	836.	23.1	22.5
OTHER ENGINEERS	2716	8438	8336	6940	6886	1498	1450	7475.	7437.	2608.	2568.	34.9	34.5
PHYSICAL SCIENTISTS (TOTAL)	2720	19389	19633	16986	17263	2403	2370	17901.	18181.	6743.	6956.	37.7	38.3
ASTRONOMERS	2721	755	892	676	813	79	79	696.	808.	380.	405.	54.6	50.1
CHEMISTS	2722	9448	9424	8151	8099	1297	1325	8674.	8640.	2882.	2922.	33.2	33.8
PHYSICISTS	2723	8257	8133	7363	7398	894	735	7669.	7659.	2951.	2968.	38.5	38.8
OTHER PHYSICAL SCIENTISTS	27[illegible]	929	1184	796	953	133	231	862.	1074.	529.	660.	61.4	61.5
ENVIRONMENTAL SCIENTISTS (TOTAL)	2[illegible]	7020	7131	6313	6302	707	829	6625.	6597.	2924.	2891.	44.1	43.8
ATMOSPHERIC SCIENTISTS	27[illegible]	930	760	819	689	111	71	871.	715.	539.	393.	61.9	55.0
EARTH SCIENTISTS	2732	4095	4318	3666	3787	429	531	3854.	3944.	1238.	1345.	32.1	34.1
OCEANOGRAPHERS	2733	1496	1445	1380	1339	116	106	1424.	1395.	929.	909.	65.2	65.2
OTHER ENVIRONMENTAL SCIENTISTS	2734	499	608	448	487	51	121	477.	543.	218.	245.	45.7	45.1
MATHEMATICAL SCIENTISTS (TOTAL)	2740	18412	17472	14586	13935	3826	3537	16012.	15219.	2007.	1921.	12.5	12.6
MATHEMATICIANS	2741	12139	11788	9630	9444	2509	2344	10579.	10307.	1190.	1210.	11.2	11.7
COMPUTER SCIENTISTS	2742	6273	5684	4956	4491	1317	1193	5433.	4912.	817.	711.	15.0	14.5
LIFE SCIENTISTS (TOTAL)	2750	126985	123165	100756	98449	26229	24716	109808.	107804.	35386.	34755.	32.2	32.2
AGRICULTURAL SCIENTISTS	2751	14126	14033	13122	12811	1004	1222	13678.	13431.	6460.	6502.	47.2	48.4
BIOLOGICAL SCIENTISTS	2752	33995	33017	30238	29607	3757	3410	31741.	30636.	12782.	12345.	40.3	40.3
MEDICAL SCIENTISTS	2753	71636	69910	51712	51230	19924	18680	58298.	58515.	15466.	15306.	26.5	26.2
OTHER LIFE SCIENTISTS	2754	7228	6205	5684	4801	1544	1404	6091.	5221.	677.	603.	11.1	11.5
PSYCHOLOGISTS (TOTAL)	2760	10416	10410	8230	8207	2186	2203	8960.	8986.	1367.	1350.	15.3	15.0
SOCIAL SCIENTISTS (TOTAL)	2770	28171	28767	23011	23268	5160	5499	24766.	25144.	3365.	3299.	13.6	13.1
ECONOMISTS	2771	8299	8344	6820	6828	1479	1516	7310.	7342.	1148.	1179.	15.7	16.1
POLITICAL SCIENTISTS	2772	5716	5800	4660	4694	1056	1106	5011.	5113.	607.	563.	12.1	11.0
SOCIOLOGISTS	2773	6257	6528	4992	5249	1265	1279	5397.	5697.	564.	606.	10.5	10.6
OTHER SOCIAL SCIENTISTS	2774	7899	8095	6539	6497	1360	1598	7047.	6991.	1046.	952.	14.8	13.6
TOTAL	2700	236560	232043	191731	188742	44829	43301	207363.	204649.	58730.	57780.	28.3	28.2

TABLE A1E

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PUBLIC DOCTORATE GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	86717	85482	78952	77889	7765	7593
FIRST PROFESSIONAL	2220	26631	26437	19161	19104	7470	7333
MASTER'S	2230	27576	27162	21261	20710	6315	6452
BACHELOR'S OR THE EQUIVALENT	2240	18272	18103	13377	13339	4895	4764
TOTAL	2200	159196	157184	132751	131042	26445	26142

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	15504	15186	2609	2660	14871	14646	2385	2472	633	540	224	188
AERONAUTICAL & ASTRONAUTICAL	2611	518	501	63	71	509	493	61	71	9	8	2	0
CHEMICAL ENGINEERS	2612	1242	1229	234	191	1176	1166	217	173	66	63	17	18
CIVIL ENGINEERS	2613	2920	2811	467	494	2790	2696	423	449	130	115	44	45
ELECTRICAL ENGINEERS	2614	3022	2844	393	432	2939	2779	371	415	83	65	22	17
MECHANICAL ENGINEERS	2615	2478	2430	367	400	2428	2385	346	376	50	45	21	24
OTHER ENGINEERS	2616	5324	5371	1085	1072	5029	5127	967	988	295	244	118	84
PHYSICAL SCIENTISTS (TOTAL)	2620	11160	11275	1536	1488	10242	10379	1198	1164	918	896	338	324
ASTRONOMERS	2621	477	616	40	55	440	572	32	42	37	44	8	13
CHEMISTS	2622	5474	5445	916	928	4851	4855	655	680	623	590	261	248
PHYSICISTS	2623	4707	4668	506	418	4497	4463	450	371	210	205	56	47
OTHER PHYSICAL SCIENTISTS	2624	502	546	74	87	454	489	61	71	48	57	13	16
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	5067	5019	556	613	4592	4559	413	459	475	460	143	154
ATMOSPHERIC SCIENTISTS	2631	721	562	99	70	660	529	79	60	61	33	20	10
EARTH SCIENTISTS	2632	2939	3076	323	410	2705	2826	248	311	234	250	75	99
OCEANOGRAPHERS	2633	1030	1003	99	81	898	877	69	58	132	126	30	23
OTHER ENVIRONMENTAL SCIENTISTS	2634	377	378	35	52	329	327	17	30	48	51	18	22
MATHEMATICAL SCIENTISTS (TOTAL)	2640	10845	10387	2228	2044	9213	8895	1547	1442	1632	1492	681	602
MATHEMATICIANS	2641	7183	7070	1526	1450	6232	6167	987	950	951	903	539	500
COMPUTER SCIENTISTS	2642	3662	3317	702	594	2981	2728	560	492	681	589	142	102
LIFE SCIENTISTS (TOTAL)	2650	66986	65728	15513	14942	50648	50219	10934	10785	16338	15509	4579	4157
AGRICULTURAL SCIENTISTS	2651	12667	12365	993	1185	11295	11070	730	918	1372	1295	263	267
BIOLOGICAL SCIENTISTS	2652	19551	19207	2466	2243	15149	14984	1476	1361	4402	4223	990	882
MEDICAL SCIENTISTS	2653	30321	30439	10809	10397	22570	22656	8192	7976	7751	7783	2617	2421
OTHER LIFE SCIENTISTS	2654	4447	3717	1245	1117	1634	1509	536	530	2813	2208	709	587
PSYCHOLOGISTS (TOTAL)	2660	5888	5927	1016	1073	4452	4443	608	608	1436	1479	408	465
SOCIAL SCIENTISTS (TOTAL)	2670	17301	17520	2987	3322	14963	14091	1902	2123	3338	3429	1085	1199
ECONOMISTS	2671	4989	5019	745	832	4480	4514	595	671	509	505	150	161
POLITICAL SCIENTISTS	2672	3274	3249	505	551	2813	2773	372	391	461	476	133	160
SOCIOLOGISTS	2673	3843	4059	826	760	2787	2921	430	404	1056	1138	396	356
OTHER SOCIAL SCIENTISTS	2674	5195	5193	911	1179	3883	3883	505	657	1312	1310	406	522
TOTAL	2600	132751	131042	26445	26142	107981	107237	18987	19053	24770	23805	7458	7089

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	18113	17846	15504	15186	2609	2660	16513.	16110.	3936.	3807.	23.8	23.6
AERONAUTICAL & ASTRONAUTICAL	2711	581	572	518	501	63	71	537.	515.	137.	114.	25.5	22.1
CHEMICAL ENGINEERS	2712	1476	1420	1242	1229	234	191	1336.	1290.	337.	289.	25.2	22.4
CIVIL ENGINEERS	2713	3387	3305	2920	2811	467	494	3120.	2998.	533.	573.	17.1	19.1
ELECTRICAL ENGINEERS	2714	3415	3276	3022	2844	393	432	3161.	2966.	737.	601.	23.3	20.3
MECHANICAL ENGINEERS	2715	2845	2830	2478	2430	367	400	2609.	2554.	443.	427.	17.0	16.7
OTHER ENGINEERS	2716	6409	6443	5324	5371	1085	1072	5751.	5786.	1750.	1803.	30.4	31.2
PHYSICAL SCIENTISTS (TOTAL)	2720	12696	12763	11160	11275	1536	1488	11826.	11818.	3893.	3861.	32.9	32.7
ASTRONOMERS	2721	517	671	477	616	40	55	484.	603.	258.	293.	53.3	48.6
CHEMISTS	2722	6390	6373	5474	5445	916	928	5884.	5807.	1676.	1612.	28.5	27.8
PHYSICISTS	2723	5213	5086	4707	4668	506	418	4912.	4798.	1591.	1527.	32.4	31.8
OTHER PHYSICAL SCIENTISTS	2724	576	633	502	546	74	87	546.	610.	367.	429.	67.2	70.3
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	5623	5632	5067	5019	556	613	5314.	5227.	2271.	2197.	42.7	42.0
ATMOSPHERIC SCIENTISTS	2731	820	632	721	562	99	70	770.	588.	484.	326.	62.9	55.4
EARTH SCIENTISTS	2732	3262	3486	2939	3076	323	410	3081.	3185.	954.	1060.	31.0	33.3
OCEANOGRAPHERS	2733	1129	1084	1030	1003	99	81	1066.	1046.	646.	619.	60.6	59.2
OTHER ENVIRONMENTAL SCIENTISTS	2734	412	430	377	378	35	52	397.	408.	187.	192.	47.1	47.1
MATHEMATICAL SCIENTISTS (TOTAL)	2740	13073	12431	10845	10387	2228	2044	11684.	11102.	1034.	976.	8.8	8.8
MATHEMATICIANS	2741	8709	8520	7183	7070	1526	1450	7765.	7601.	566.	552.	7.3	7.3
COMPUTER SCIENTISTS	2742	4364	3911	3662	3317	702	594	3919.	3501.	468.	424.	11.9	12.1
LIFE SCIENTISTS (TOTAL)	2750	82499	80670	66986	65728	15513	14942	72047.	70997.	23451.	22423.	32.5	31.6
AGRICULTURAL SCIENTISTS	2751	13660	13550	12667	12365	993	1185	13215.	12964.	6255.	6296.	47.3	48.6
BIOLOGICAL SCIENTISTS	2752	22017	21450	19551	19207	2466	2243	20453.	19912.	7567.	7145.	37.0	35.9
MEDICAL SCIENTISTS	2753	41130	40836	30321	30439	10809	10397	33637.	34095.	9181.	8633.	27.3	25.3
OTHER LIFE SCIENTISTS	2754	5692	4834	4447	3717	1245	1117	4741.	4025.	449.	349.	9.5	8.7
PSYCHOLOGISTS (TOTAL)	2760	6904	7000	5888	5927	1016	1073	6217.	6275.	794.	836.	12.8	13.3
SOCIAL SCIENTISTS (TOTAL)	2770	20288	20842	17301	17520	2987	3322	18280.	18558.	2360.	2335.	12.9	12.6
ECONOMISTS	2771	5734	5851	4989	5019	745	832	5232.	5283.	868.	885.	16.6	16.8
POLITICAL SCIENTISTS	2772	3779	3800	3274	3249	505	551	3458.	3475.	376.	355.	10.9	10.2
SOCIOLOGISTS	2773	4669	4819	3843	4059	826	760	4077.	4298.	386.	424.	9.5	9.9
OTHER SOCIAL SCIENTISTS	2774	6106	6372	5195	5193	911	1179	5514.	5502.	729.	672.	13.2	12.2
TOTAL	2700	159196	157184	132751	131042	26445	26142	141881.	140086.	37738.	36435.	26.6	26.0

TABLE A1F

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PRIVATE DOCTORATE GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	38072	36950	32761	31785	5311	5165
FIRST PROFESSIONAL	2220	25449	24679	17080	17095	8369	7584
MASTER'S	2230	8335	8048	5074	4894	3261	3154
BACHELOR'S OR THE EQUIVALENT	2240	5508	5182	4065	3926	1443	1256
TOTAL	2200	77364	74859	58980	57700	18384	17159

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	6345	6132	1709	1487	6135	5957	1617	1427	210	175	92	60
AERONAUTICAL & ASTRONAUTICAL	2611	349	353	78	63	343	348	72	60	6	5	6	3
CHEMICAL ENGINEERS	2612	496	489	126	82	480	475	105	78	16	14	21	4
CIVIL ENGINEERS	2613	758	682	241	216	714	660	227	207	44	22	14	9
ELECTRICAL ENGINEERS	2614	2066	2018	560	450	2012	1973	542	436	54	45	18	14
MECHANICAL ENGINEERS	2615	1060	1075	291	298	1037	1056	285	292	23	19	6	6
OTHER ENGINEERS	2616	1616	1515	413	378	1549	1445	386	354	67	70	27	24
PHYSICAL SCIENTISTS (TOTAL)	2620	5826	5988	867	882	5348	5492	708	708	478	496	159	174
ASTRONOMERS	2621	199	197	39	24	184	183	33	21	15	14	6	3
CHEMISTS	2622	2677	2654	381	397	2355	2333	279	302	322	321	102	95
PHYSICISTS	2623	2656	2730	388	317	2538	2617	349	283	118	113	39	34
OTHER PHYSICAL SCIENTISTS	2624	294	407	59	144	271	359	47	102	23	48	12	42
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1246	1283	151	216	1110	1123	112	152	136	160	39	64
ATMOSPHERIC SCIENTISTS	2631	98	127	12	1	92	114	10	1	6	13	2	0
EARTH SCIENTISTS	2632	727	711	106	121	658	658	81	96	69	53	25	25
OCEANOGRAPHERS	2633	350	336	17	25	294	271	10	17	56	65	7	8
OTHER ENVIRONMENTAL SCIENTISTS	2634	71	109	16	69	66	80	11	38	5	29	5	31
MATHEMATICAL SCIENTISTS (TOTAL)	2640	3741	3548	1598	1493	3308	3111	1309	1240	433	437	289	253
MATHEMATICIANS	2641	2447	2374	983	894	2186	2103	788	724	261	271	195	170
COMPUTER SCIENTISTS	2642	1294	1174	615	599	1122	1008	521	516	172	166	94	83
LIFE SCIENTISTS (TOTAL)	2650	33770	32721	10716	9774	25956	25391	8469	7888	7814	7330	2047	1886
AGRICULTURAL SCIENTISTS	2651	455	446	11	37	404	402	6	31	51	44	5	6
BIOLOGICAL SCIENTISTS	2652	10687	10400	1291	1167	8041	7905	839	786	2646	2495	452	381
MEDICAL SCIENTISTS	2653	21391	20791	9115	8283	17096	16572	7711	6934	4295	4219	1404	1349
OTHER LIFE SCIENTISTS	2654	1237	1084	299	287	415	512	113	137	822	572	186	150
PSYCHOLOGISTS (TOTAL)	2660	2342	2280	1170	1130	1698	1674	748	727	644	606	422	403
SOCIAL SCIENTISTS (TOTAL)	2670	5710	5748	2173	2177	4688	4678	1631	1614	1022	1070	542	563
ECONOMISTS	2671	1831	1809	734	684	1658	1647	659	625	173	162	75	59
POLITICAL SCIENTISTS	2672	1386	1445	551	555	1202	1242	454	454	184	203	97	101
SOCIOLOGISTS	2673	1149	1190	439	519	844	848	244	272	305	342	195	247
OTHER SOCIAL SCIENTISTS	2674	1344	1304	449	419	984	941	274	263	360	363	175	156
TOTAL	2600	58980	57700	18384	17159	48243	47426	14794	13756	10737	10274	3590	3403

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	8054	7619	6345	6132	1709	1487	6777.	6609.	3062.	2800.	44.3	42.4
AERONAUTICAL & ASTRONAUTICAL	2711	427	416	349	353	78	63	369.	380.	181.	190.	49.1	50.0
CHEMICAL ENGINEERS	2712	622	571	496	489	126	82	522.	514.	187.	162.	35.8	31.5
CIVIL ENGINEERS	2713	999	898	758	682	241	216	825.	747.	221.	185.	26.8	24.8
ELECTRICAL ENGINEERS	2714	2626	2468	2066	2018	560	450	2211.	2155.	1134.	1089.	51.3	50.5
MECHANICAL ENGINEERS	2715	1351	1373	1060	1075	291	298	1126.	1162.	421.	409.	37.4	35.2
OTHER ENGINEERS	2716	2029	1893	1616	1515	413	378	1725.	1650.	858.	765.	49.7	46.4
PHYSICAL SCIENTISTS (TOTAL)	2720	6693	6870	5826	5988	867	882	6075.	6363.	2850.	3095.	46.9	48.6
ASTRONOMERS	2721	238	221	199	197	39	24	212.	205.	121.	112.	57.1	54.6
CHEMISTS	2722	3058	3051	2677	2654	381	397	2791.	2833.	1206.	1311.	43.2	46.3
PHYSICISTS	2723	3044	3047	2656	2730	388	317	2756.	2861.	1360.	1442.	49.3	50.4
OTHER PHYSICAL SCIENTISTS	2724	353	551	294	407	59	144	316.	464.	162.	231.	51.3	49.8
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1397	1499	1246	1283	151	216	1311.	1370.	654.	694.	49.9	50.7
ATMOSPHERIC SCIENTISTS	2731	110	128	98	127	12	1	101.	127.	55.	68.	54.5	53.5
EARTH SCIENTISTS	2732	833	832	727	711	106	121	773.	759.	284.	285.	36.7	37.5
OCEANOGRAPHERS	2733	367	361	350	336	17	25	357.	349.	284.	290.	79.6	83.1
OTHER ENVIRONMENTAL SCIENTISTS	2734	87	178	71	109	16	69	79.	135.	31.	52.	39.2	38.5
MATHEMATICAL SCIENTISTS (TOTAL)	2740	5339	5041	3741	3548	1598	1493	4328.	4117.	974.	945.	22.5	23.0
MATHEMATICIANS	2741	3430	3268	2447	2374	983	894	2813.	2706.	624.	658.	22.2	24.3
COMPUTER SCIENTISTS	2742	1909	1773	1294	1174	615	599	1515.	1411.	349.	287.	23.0	20.3
LIFE SCIENTISTS (TOTAL)	2750	44486	42495	33770	32721	10716	9774	37762.	36807.	11935.	12332.	31.6	33.5
AGRICULTURAL SCIENTISTS	2751	466	483	455	446	11	37	463.	467.	205.	206.	44.3	44.1
BIOLOGICAL SCIENTISTS	2752	11978	11567	10687	10400	1291	1167	11288.	10724.	5216.	5200.	46.2	48.5
MEDICAL SCIENTISTS	2753	30506	29074	21391	20791	9115	8283	24661.	24420.	6285.	6673.	25.5	27.3
OTHER LIFE SCIENTISTS	2754	1536	1371	1237	1084	299	287	1350.	1196.	228.	253.	16.9	21.2
PSYCHOLOGISTS (TOTAL)	2760	3512	3410	2342	2280	1170	1130	2743.	2712.	573.	515.	20.9	19.0
SOCIAL SCIENTISTS (TOTAL)	2770	7883	7925	5710	5748	2173	2177	6486.	6586.	1005.	964.	15.5	14.6
ECONOMISTS	2771	2565	2493	1831	1809	734	684	2078.	2059.	280.	294.	13.5	14.3
POLITICAL SCIENTISTS	2772	1937	2000	1386	1445	551	555	1554.	1638.	231.	208.	14.9	12.7
SOCIOLOGISTS	2773	1588	1709	1149	1190	439	519	1321.	1399.	177.	182.	13.4	13.0
OTHER SOCIAL SCIENTISTS	2774	1793	1723	1344	1304	449	419	1533.	1489.	317.	280.	20.7	18.8
TOTAL	2700	77364	74859	58980	57700	18384	17159	65482.	64563.	20991.	21345.	32.1	33.1

TABLE A1G

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
MASTER'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	24012	23365	21110	20414	2902	2951
FIRST PROFESSIONAL	2220	607	612	279	393	328	219
MASTER'S	2230	13130	12387	7355	6981	5775	5406
BACHELOR'S OR THE EQUIVALENT	2240	2796	2554	874	832	1922	1722
TOTAL	2200	40545	38918	29618	28620	10927	10298

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	2144	2018	1296	1195	2088	1960	1255	1159	56	58	41	36
AERONAUTICAL & ASTRONAUTICAL	2611	24	26	17	14	23	25	17	14	1	1	0	0
CHEMICAL ENGINEERS	2612	117	115	52	36	113	108	51	34	4	7	1	2
CIVIL ENGINEERS	2613	467	436	210	194	445	418	203	188	22	18	7	6
ELECTRICAL ENGINEERS	2614	591	533	430	357	585	526	415	349	6	7	15	8
MECHANICAL ENGINEERS	2615	497	498	318	334	491	488	311	325	6	10	7	9
OTHER ENGINEERS	2616	448	410	269	260	431	395	258	249	17	15	11	11
PHYSICAL SCIENTISTS (TOTAL)	2620	3981	3934	1046	926	3613	3586	786	680	368	348	260	246
ASTRONOMERS	2621	62	60	17	14	58	56	15	12	4	4	2	2
CHEMISTS	2622	2280	2250	568	518	2003	1987	372	330	277	263	196	188
PHYSICISTS	2623	1495	1495	401	347	1437	1442	357	305	58	53	44	42
OTHER PHYSICAL SCIENTISTS	2624	144	129	60	47	115	101	42	33	29	28	18	14
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1132	1115	268	219	1035	1030	222	178	97	85	46	41
ATMOSPHERIC SCIENTISTS	2631	31	35	17	15	30	34	17	15	1	1	0	0
EARTH SCIENTISTS	2632	954	916	194	156	886	855	160	124	68	61	34	32
OCEANOGRAPHERS	2633	46	52	13	9	36	39	11	8	10	13	2	1
OTHER ENVIRONMENTAL SCIENTISTS	2634	101	112	44	39	83	102	34	31	18	10	10	8
MATHEMATICAL SCIENTISTS (TOTAL)	2640	5193	4902	2772	2364	4217	4021	2052	1734	976	881	720	630
MATHEMATICIANS	2641	3761	3688	1762	1556	3045	3016	1234	1049	716	672	528	507
COMPUTER SCIENTISTS	2642	1432	1214	1010	808	1172	1005	818	685	260	209	192	123
LIFE SCIENTISTS (TOTAL)	2650	5865	5417	1575	1345	4024	3934	807	738	1841	1483	768	607
AGRICULTURAL SCIENTISTS	2651	648	606	109	111	578	549	84	83	70	57	25	28
BIOLOGICAL SCIENTISTS	2652	3637	3540	775	784	2949	2897	445	472	688	643	330	312
MEDICAL SCIENTISTS	2653	409	422	269	148	203	268	157	104	206	154	112	44
OTHER LIFE SCIENTISTS	2654	1171	849	422	302	294	220	121	79	877	629	301	223
PSYCHOLOGISTS (TOTAL)	2660	3485	3480	1352	1420	2588	2611	795	837	897	869	557	583
SOCIAL SCIENTISTS (TOTAL)	2670	7818	7754	2618	2829	6349	6286	1941	2093	1469	1468	677	736
ECONOMISTS	2671	2052	1974	864	966	1820	1756	752	829	232	218	112	137
POLITICAL SCIENTISTS	2672	1904	1898	541	530	1647	1647	421	415	257	251	120	115
SOCIOLOGISTS	2673	2174	2202	578	712	1591	1611	347	449	583	591	231	263
OTHER SOCIAL SCIENTISTS	2674	1688	1680	635	621	1291	1272	421	400	397	408	214	221
TOTAL	2600	29618	28620	10927	10298	23914	23428	7858	7419	5704	5192	3069	2879

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	3440	3213	2144	2018	1296	1195	2555.	2349.	79.	78.	3.1	3.3
AERONAUTICAL & ASTRONAUTICAL	2711	41	40	24	26	17	14	32.	32.	2.	5.	6.3	15.6
CHEMICAL ENGINEERS	2712	169	151	117	115	52	36	133.	128.	7.	6.	5.3	4.7
CIVIL ENGINEERS	2713	677	630	467	436	210	194	541.	498.	12.	17.	2.2	3.4
ELECTRICAL ENGINEERS	2714	1021	890	591	533	430	357	729.	634.	22.	22.	3.0	3.5
MECHANICAL ENGINEERS	2715	815	832	497	498	318	334	598.	578.	21.	17.	3.5	2.9
OTHER ENGINEERS	2716	717	670	448	410	269	260	523.	480.	16.	11.	3.1	2.3
PHYSICAL SCIENTISTS (TOTAL)	2720	5027	4860	3981	3934	1046	926	4395.	4300.	195.	195.	4.4	4.5
ASTRONOMERS	2721	79	74	62	60	17	14	70.	65.	1.	2.	1.4	3.1
CHEMISTS	2722	2848	2768	2280	2250	568	518	2511.	2459.	104.	93.	4.1	3.8
PHYSICISTS	2723	1896	1842	1495	1495	401	347	1649.	1632.	48.	58.	2.9	3.6
OTHER PHYSICAL SCIENTISTS	2724	204	176	144	129	60	47	165.	144.	42.	42.	25.5	29.2
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1400	1334	1132	1115	268	219	1227.	1198.	81.	81.	6.6	6.8
ATMOSPHERIC SCIENTISTS	2731	48	50	31	35	17	15	37.	43.	6.	6.	16.2	14.0
EARTH SCIENTISTS	2732	1148	1072	954	916	194	156	1016.	973.	52.	52.	5.1	5.3
OCEANOGRAPHERS	2733	59	61	46	52	13	9	58.	56.	14.	14.	24.1	25.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	145	151	101	112	44	39	115.	125.	10.	9.	8.7	7.2
MATHEMATICAL SCIENTISTS (TOTAL)	2740	7965	7266	5193	4902	2772	2364	6280.	5841.	115.	121.	1.8	2.1
MATHEMATICIANS	2741	5523	5244	3761	3688	1762	1556	4484.	4326.	67.	72.	1.5	1.7
COMPUTER SCIENTISTS	2742	2442	2022	1432	1214	1010	808	1796.	1515.	49.	49.	2.7	3.2
LIFE SCIENTISTS (TOTAL)	2750	7440	6762	5865	5417	1575	1345	6348.	5915.	272.	256.	4.3	4.3
AGRICULTURAL SCIENTISTS	2751	757	717	648	606	109	111	692.	649.	68.	61.	9.8	9.4
BIOLOGICAL SCIENTISTS	2752	4412	4324	3637	3540	775	784	3913.	3813.	182.	169.	4.7	4.4
MEDICAL SCIENTISTS	2753	678	570	409	422	269	148	433.	474.	7.	15.	1.6	3.2
OTHER LIFE SCIENTISTS	2754	1593	1151	1171	849	422	302	1310.	979.	15.	12.	1.1	1.2
PSYCHOLOGISTS (TOTAL)	2760	4837	4900	3485	3480	1352	1420	3929.	3972.	53.	60.	1.3	1.5
SOCIAL SCIENTISTS (TOTAL)	2770	10436	10583	7818	7754	2618	2829	8744.	8749.	174.	194.	2.0	2.2
ECONOMISTS	2771	2916	2940	2052	1974	864	966	2365.	2326.	31.	37.	1.3	1.6
POLITICAL SCIENTISTS	2772	2445	2428	1904	1898	541	530	2085.	2063.	40.	43.	1.9	2.1
SOCIOLOGISTS	2773	2752	2914	2174	2202	578	712	2367.	2443.	51.	54.	2.2	2.2
OTHER SOCIAL SCIENTISTS	2774	2323	2301	1688	1680	635	621	1927.	1917.	52.	60.	2.7	3.1
TOTAL	2700	40545	38918	29618	28620	10927	10298	33478.	32325.	971.	985.	2.9	3.0

TABLE A1H

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PUBLIC MASTER'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	17920	17338	16349	15818	1571	1520
FIRST PROFESSIONAL	2220	392	444	200	319	192	125
MASTER'S	2230	8995	8668	5620	5477	3375	3191
BACHELOR'S OR THE EQUIVALENT	2240	2107	1967	690	660	1417	1307
TOTAL	2200	29414	28417	22859	22274	6555	6143

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	1504	1395	852	801	1461	1351	814	770	43	44	38	31
AERONAUTICAL & ASTRONAUTICAL	2611	18	19	13	11	18	19	13	11	0	0	0	0
CHEMICAL ENGINEERS	2612	74	81	29	19	72	76	28	17	2	5	1	2
CIVIL ENGINEERS	2613	372	338	161	155	352	322	154	149	20	16	7	6
ELECTRICAL ENGINEERS	2614	355	318	256	217	351	313	241	210	4	5	15	7
MECHANICAL ENGINEERS	2615	293	296	176	191	289	289	171	185	4	7	5	6
OTHER ENGINEERS	2616	392	343	217	208	379	332	207	198	13	11	10	10
PHYSICAL SCIENTISTS (TOTAL)	2620	2932	2892	611	547	2676	2646	454	393	256	246	157	154
ASTRONOMERS	2621	50	51	11	9	47	48	9	8	3	3	2	1
CHEMISTS	2622	1669	1643	316	324	1487	1465	201	202	182	178	115	122
PHYSICISTS	2623	1086	1083	248	189	1042	1044	219	164	44	39	29	25
OTHER PHYSICAL SCIENTISTS	2624	127	115	36	25	100	89	25	19	27	26	11	6
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1009	1006	198	168	931	933	160	136	78	73	38	32
ATMOSPHERIC SCIENTISTS	2631	29	33	10	8	28	32	10	8	1	1	0	0
EARTH SCIENTISTS	2632	850	822	143	129	793	769	117	102	57	53	24	27
OCEANOGRAPHERS	2633	45	49	9	7	36	38	7	6	9	11	2	1
OTHER ENVIRONMENTAL SCIENTISTS	2634	85	102	36	24	74	94	26	20	11	8	10	4
MATHEMATICAL SCIENTISTS (TOTAL)	2640	4104	3925	1736	1531	3337	3207	1244	1091	767	718	492	440
MATHEMATICIANS	2641	2981	2944	1112	1029	2420	2398	743	674	561	546	369	355
COMPUTER SCIENTISTS	2642	1123	981	624	502	917	809	501	417	206	172	123	85
LIFE SCIENTISTS (TOTAL)	2650	4535	4281	879	810	3183	3131	453	458	1352	1150	426	352
AGRICULTURAL SCIENTISTS	2651	603	579	99	103	542	522	75	76	61	57	24	27
BIOLOGICAL SCIENTISTS	2652	2789	2772	438	467	2300	2298	247	278	489	474	191	189
MEDICAL SCIENTISTS	2653	194	275	90	79	101	147	69	65	93	128	21	14
OTHER LIFE SCIENTISTS	2654	949	655	252	161	240	164	62	39	709	491	190	122
PSYCHOLOGISTS (TOTAL)	2660	2697	2718	681	676	2031	2059	386	380	666	659	295	296
SOCIAL SCIENTISTS (TOTAL)	2670	6078	6057	1598	1610	4969	4944	1179	1186	1109	1113	419	424
ECONOMISTS	2671	1492	1443	511	529	1330	1285	451	461	162	158	60	68
POLITICAL SCIENTISTS	2672	1430	1431	308	307	1254	1253	236	242	176	178	72	65
SOCIOLOGISTS	2673	1665	1704	334	360	1223	1251	183	212	442	453	151	148
OTHER SOCIAL SCIENTISTS	2674	1491	1479	445	414	1162	1155	309	271	329	324	136	143
TOTAL	2600	22859	22274	6555	6143	18588	18271	4690	4414	4271	4003	1865	1729

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	2356	2196	1504	1395	852	801	1758.	1626.	48.	46.	2.7	2.8
AERONAUTICAL & ASTRONAUTICAL	2711	31	30	18	19	13	11	22.	22.	0.	2.	0.0	9.1
CHEMICAL ENGINEERS	2712	103	100	74	81	29	19	81.	85.	4.	4.	4.9	4.7
CIVIL ENGINEERS	2713	533	493	372	338	161	155	429.	386.	8.	10.	1.9	2.6
ELECTRICAL ENGINEERS	2714	611	535	355	318	256	217	433.	387.	14.	15.	3.2	3.9
MECHANICAL ENGINEERS	2715	469	487	293	296	176	191	342.	347.	12.	10.	3.5	2.9
OTHER ENGINEERS	2716	609	551	392	343	217	208	452.	399.	12.	5.	2.7	1.3
PHYSICAL SCIENTISTS (TOTAL)	2720	3543	3439	2932	2892	611	547	3151.	3102.	163.	151.	5.2	4.9
ASTRONOMERS	2721	61	60	50	51	11	9	54.	53.	1.	2.	1.9	3.8
CHEMISTS	2722	1985	1967	1669	1643	316	324	1786.	1773.	85.	69.	4.8	3.9
PHYSICISTS	2723	1334	1272	1086	1083	248	189	1168.	1152.	35.	38.	3.0	3.3
OTHER PHYSICAL SCIENTISTS	2724	163	140	127	115	36	25	142.	124.	42.	42.	29.6	33.9
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1207	1174	1009	1006	198	168	1069.	1064.	80.	76.	7.5	7.1
ATMOSPHERIC SCIENTISTS	2731	39	41	29	33	10	8	30.	35.	5.	5.	16.7	14.3
EARTH SCIENTISTS	2732	993	951	850	822	143	129	890.	869.	52.	51.	5.8	5.9
OCEANOGRAPHERS	2733	54	56	45	49	9	7	54.	51.	14.	14.	25.9	27.5
OTHER ENVIRONMENTAL SCIENTISTS	2734	121	126	85	102	36	24	95.	109.	10.	6.	10.5	5.5
MATHEMATICAL SCIENTISTS (TOTAL)	2740	5840	5456	4104	3925	1736	1531	4774.	4540.	94.	102.	2.0	2.2
MATHEMATICIANS	2741	4093	3973	2981	2944	1112	1029	3438.	3373.	57.	64.	1.7	1.9
COMPUTER SCIENTISTS	2742	1747	1483	1123	981	624	502	1336.	1167.	37.	38.	2.8	3.3
LIFE SCIENTISTS (TOTAL)	2750	5414	5091	4535	4281	879	810	4822.	4575.	247.	215.	5.1	4.7
AGRICULTURAL SCIENTISTS	2751	702	682	603	579	99	103	645.	618.	63.	56.	9.8	9.1
BIOLOGICAL SCIENTISTS	2752	3227	3239	2789	2772	438	467	2934.	2930.	163.	140.	5.6	4.8
MEDICAL SCIENTISTS	2753	284	354	194	275	90	79	221.	302.	7.	10.	3.2	3.3
OTHER LIFE SCIENTISTS	2754	1201	816	949	655	252	161	1022.	724.	15.	9.	1.5	1.2
PSYCHOLOGISTS (TOTAL)	2760	3378	3394	2697	2718	681	676	2885.	2906.	47.	50.	1.6	1.7
SOCIAL SCIENTISTS (TOTAL)	2770	7676	7667	6078	6057	1598	1610	6618.	6598.	152.	160.	2.3	2.4
ECONOMISTS	2771	2003	1972	1492	1443	511	529	1663.	1624.	24.	26.	1.4	1.6
POLITICAL SCIENTISTS	2772	1738	1738	1430	1431	308	307	1535.	1528.	32.	34.	2.1	2.2
SOCIOLOGISTS	2773	1999	2064	1665	1704	334	360	1768.	1823.	45.	44.	2.5	2.4
OTHER SOCIAL SCIENTISTS	2774	1936	1893	1491	1479	445	414	1651.	1625.	51.	57.	3.1	3.5
TOTAL	2700	29414	28417	22859	22274	6555	6143	25078.	24410.	830.	801.	3.3	3.3

TABLE A11

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PRIVATE MASTER'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	6092	6027	4761	4596	1331	1431
FIRST PROFESSIONAL	2220	215	168	79	74	136	94
MASTER'S	2230	4135	3719	1735	1504	2400	2215
BACHELOR'S OR THE EQUIVALENT	2240	689	587	184	172	505	415
TOTAL	2200	11131	10501	6759	6346	4372	4155

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	640	623	444	394	627	609	441	389	13	14	3	5
AERONAUTICAL & ASTRONAUTICAL	2611	6	7	4	3	5	6	4	3	1	1	0	0
CHEMICAL ENGINEERS	2612	43	34	23	17	41	32	23	17	2	2	0	0
CIVIL ENGINEERS	2613	95	98	49	39	93	96	49	39	2	2	0	0
ELECTRICAL ENGINEERS	2614	236	215	174	140	234	213	174	139	2	2	0	1
MECHANICAL ENGINEERS	2615	204	202	142	143	202	199	140	140	2	3	2	3
OTHER ENGINEERS	2616	56	67	52	52	52	63	51	51	4	4	1	1
PHYSICAL SCIENTISTS (TOTAL)	2620	1049	1042	435	379	937	940	332	287	112	102	103	92
ASTRONOMERS	2621	12	9	6	5	11	8	6	4	1	1	0	1
CHEMISTS	2622	611	607	252	194	516	522	171	128	95	85	81	66
PHYSICISTS	2623	409	412	153	158	395	398	138	141	14	14	15	17
OTHER PHYSICAL SCIENTISTS	2624	17	14	24	22	15	12	17	14	2	2	7	8
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	123	109	70	51	104	97	62	42	19	12	8	9
ATMOSPHERIC SCIENTISTS	2631	2	2	7	7	2	2	7	7	0	0	0	0
EARTH SCIENTISTS	2632	104	94	51	27	93	86	43	22	11	8	8	5
OCEANOGRAPHERS	2633	1	3	4	2	0	1	4	2	1	2	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	16	10	8	15	9	8	8	11	7	2	0	4
MATHEMATICAL SCIENTISTS (TOTAL)	2640	1089	977	1036	833	880	814	808	643	209	163	228	190
MATHEMATICIANS	2641	780	744	650	527	625	618	491	375	155	126	159	152
COMPUTER SCIENTISTS	2642	309	233	386	306	255	196	317	268	54	37	69	38
LIFE SCIENTISTS (TOTAL)	2650	1330	1136	696	535	841	803	354	280	489	333	342	255
AGRICULTURAL SCIENTISTS	2651	45	27	10	8	36	27	9	7	9	0	1	1
BIOLOGICAL SCIENTISTS	2652	848	768	337	317	649	599	198	194	199	169	139	123
MEDICAL SCIENTISTS	2653	215	147	179	69	102	121	88	39	113	26	91	30
OTHER LIFE SCIENTISTS	2654	222	194	170	141	54	56	59	40	168	138	111	101
PSYCHOLOGISTS (TOTAL)	2660	788	762	671	744	557	552	409	457	231	210	262	287
SOCIAL SCIENTISTS (TOTAL)	2670	1740	1697	1020	1219	1380	1342	762	907	360	355	258	312
ECONOMISTS	2671	560	531	353	437	490	471	301	368	70	60	52	69
POLITICAL SCIENTISTS	2672	474	467	233	223	393	394	185	173	81	73	48	50
SOCIOLOGISTS	2673	509	498	244	352	368	360	164	237	141	138	80	115
OTHER SOCIAL SCIENTISTS	2674	197	201	190	207	129	117	112	129	68	84	78	78
TOTAL	2600	6759	6346	4372	4155	5326	5157	3168	3005	1433	1189	1204	1150

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	1084	1017	640	623	444	394	797.	724.	31.	32.	3.9	4.4
AERONAUTICAL & ASTRONAUTICAL	2711	10	10	6	7	4	3	10.	10.	2.	3.	20.0	30.0
CHEMICAL ENGINEERS	2712	66	51	43	34	23	17	52.	42.	3.	2.	5.8	4.8
CIVIL ENGINEERS	2713	144	137	95	98	49	39	112.	112.	4.	7.	3.6	6.3
ELECTRICAL ENGINEERS	2714	410	355	236	215	174	140	296.	247.	8.	6.	2.7	2.4
MECHANICAL ENGINEERS	2715	346	345	204	202	142	143	255.	232.	9.	8.	3.5	3.4
OTHER ENGINEERS	2716	108	119	56	67	52	52	72.	81.	4.	6.	5.6	7.4
PHYSICAL SCIENTISTS (TOTAL)	2720	1484	1421	1049	1042	435	379	1244.	1198.	32.	44.	2.6	3.7
ASTRONOMERS	2721	18	14	12	9	6	5	15.	12.	0.	0.	0.0	0.0
CHEMISTS	2722	863	801	611	607	252	194	725.	686.	19.	24.	2.6	3.5
PHYSICISTS	2723	562	570	409	412	153	158	480.	480.	13.	20.	2.7	4.2
OTHER PHYSICAL SCIENTISTS	2724	41	36	17	14	24	22	23.	20.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	193	160	123	109	70	51	157.	134.	1.	5.	0.6	3.7
ATMOSPHERIC SCIENTISTS	2731	9	9	2	2	7	7	7.	8.	1.	1.	14.3	12.5
EARTH SCIENTISTS	2732	155	121	106	94	51	27	126.	104.	0.	1.	0.0	1.0
OCEANOGRAPHERS	2733	5	5	1	3	4	2	4.	5.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	24	25	16	10	8	15	21.	17.	0.	3.	0.0	17.6
MATHEMATICAL SCIENTISTS (TOTAL)	2740	2125	1810	1089	977	1036	833	1506.	1301.	22.	20.	1.5	1.5
MATHEMATICIANS	2741	1430	1271	780	744	650	527	1046.	953.	10.	8.	1.0	0.8
COMPUTER SCIENTISTS	2742	695	539	309	233	386	306	460.	349.	12.	11.	2.6	3.2
LIFE SCIENTISTS (TOTAL)	2750	2026	1671	1330	1136	696	535	1526.	1341.	25.	42.	1.6	3.1
AGRICULTURAL SCIENTISTS	2751	55	35	35	27	10	8	48.	31.	6.	5.	12.5	16.1
BIOLOGICAL SCIENTISTS	2752	1185	1085	848	768	337	317	979.	883.	19.	29.	1.9	3.3
MEDICAL SCIENTISTS	2753	394	216	215	147	179	69	212.	172.	1.	5.	0.5	2.9
OTHER LIFE SCIENTISTS	2754	392	335	222	194	170	141	288.	255.	0.	3.	0.0	1.2
PSYCHOLOGISTS (TOTAL)	2760	1459	1506	788	762	671	744	1044.	1066.	7.	9.	0.7	0.8
SOCIAL SCIENTISTS (TOTAL)	2770	2760	2916	1740	1697	1020	1219	2126.	2151.	22.	33.	1.0	1.5
ECONOMISTS	2771	913	968	560	531	353	437	702.	703.	7.	10.	1.0	1.4
POLITICAL SCIENTISTS	2772	707	690	474	467	233	223	549.	536.	8.	9.	1.5	1.7
SOCIOLOGISTS	2773	753	850	509	498	244	352	599.	629.	6.	11.	1.0	1.8
OTHER SOCIAL SCIENTISTS	2774	387	408	197	201	190	207	276.	292.	1.	3.	0.4	1.0
TOTAL	2700	11131	10501	6759	6346	4372	4155	8400.	7915.	141.	185.	1.7	2.3

TABLE A1J

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
BACHELOR'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	15719	15409	13838	13518	1881	1891
FIRST PROFESSIONAL	2220	614	523	231	206	383	317
MASTER'S	2230	11131	10937	7127	6966	4004	3971
BACHELOR'S OR THE EQUIVALENT	2240	2005	1946	1023	956	982	990
TOTAL	2200	29469	28815	22219	21646	7250	7169

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	1422	1331	446	419	1403	1311	436	407	19	20	10	12
AERONAUTICAL & ASTRONAUTICAL	2611	139	139	21	30	136	135	20	27	3	4	1	3
CHEMICAL ENGINEERS	2612	19	18	11	9	18	17	10	8	1	1	1	1
CIVIL ENGINEERS	2613	253	217	92	50	250	213	89	50	3	4	3	0
ELECTRICAL ENGINEERS	2614	404	383	137	164	399	379	137	163	5	4	0	1
MECHANICAL ENGINEERS	2615	313	296	95	79	312	295	93	77	1	1	2	2
OTHER ENGINEERS	2616	294	278	90	87	288	272	87	82	6	6	3	5
PHYSICAL SCIENTISTS (TOTAL)	2620	3700	3668	733	720	3251	3228	541	533	449	440	192	187
ASTRONOMERS	2621	34	36	25	26	31	32	19	20	3	4	6	6
CHEMISTS	2622	2259	2239	434	451	1897	1884	288	304	362	355	146	147
PHYSICISTS	2623	1249	1256	245	218	1185	1190	212	190	64	66	33	28
OTHER PHYSICAL SCIENTISTS	2624	158	137	29	25	138	122	22	19	20	15	7	6
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	566	559	159	147	521	512	128	119	45	47	31	28
ATMOSPHERIC SCIENTISTS	2631	14	15	17	14	14	15	17	14	0	0	0	0
EARTH SCIENTISTS	2632	405	408	118	112	372	373	90	87	33	35	28	25
OCEANOGRAPHERS	2633	54	51	4	5	51	47	4	5	3	4	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	93	85	20	16	84	77	17	13	9	8	3	3
MATHEMATICAL SCIENTISTS (TOTAL)	2640	3923	3716	1697	1544	3147	2993	1170	1064	776	723	527	480
MATHEMATICIANS	2641	2999	2976	1166	1104	2375	2365	727	686	624	611	439	418
COMPUTER SCIENTISTS	2642	924	740	531	440	772	628	443	378	152	112	88	62
LIFE SCIENTISTS (TOTAL)	2650	4586	4290	1351	1340	2986	2884	789	799	1600	1406	562	541
AGRICULTURAL SCIENTISTS	2651	245	220	38	35	223	198	35	27	22	22	3	8
BIOLOGICAL SCIENTISTS	2652	3176	3148	680	759	2437	2415	354	416	739	733	326	343
MEDICAL SCIENTISTS	2653	363	298	398	389	207	174	346	316	156	124	52	73
OTHER LIFE SCIENTISTS	2654	802	624	235	157	119	97	54	40	683	527	181	117
PSYCHOLOGISTS (TOTAL)	2660	2393	2391	953	991	1807	1799	577	590	586	592	376	401
SOCIAL SCIENTISTS (TOTAL)	2670	5629	5691	1911	2008	4519	4546	1430	1474	1110	1145	481	534
ECONOMISTS	2671	1656	1655	592	574	1475	1455	522	509	181	200	70	65
POLITICAL SCIENTISTS	2672	1406	1422	335	388	1224	1233	272	318	182	189	63	70
SOCIOLOGISTS	2673	1756	1816	612	667	1251	1270	373	390	505	546	239	277
OTHER SOCIAL SCIENTISTS	2674	811	798	372	379	569	588	263	257	242	210	109	122
TOTAL	2600	22219	21646	7250	7169	17634	17273	5071	4986	4585	4373	2179	2183

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	1868	1750	1422	1331	446	419	1600.	1518.	34.	34.	2.1	2.2
AERONAUTICAL & ASTRONAUTICAL	2711	160	169	139	139	21	30	142.	149.	5.	5.	3.5	3.4
CHEMICAL ENGINEERS	2712	30	27	19	18	11	9	26.	25.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	345	267	253	217	92	50	295.	240.	3.	5.	1.0	2.1
ELECTRICAL ENGINEERS	2714	541	547	404	383	137	164	459.	456.	11.	9.	2.4	2.0
MECHANICAL ENGINEERS	2715	408	375	313	296	95	79	351.	335.	7.	7.	2.0	2.1
OTHER ENGINEERS	2716	384	365	294	278	90	87	327.	314.	8.	8.	2.4	2.5
PHYSICAL SCIENTISTS (TOTAL)	2720	4433	4388	3700	3668	733	720	4062.	4053.	104.	129.	2.6	3.2
ASTRONOMERS	2721	59	62	34	36	25	26	43.	45.	0.	0.	0.0	0.0
CHEMISTS	2722	2693	2690	2259	2239	434	451	2471.	2483.	62.	78.	2.5	3.1
PHYSICISTS	2723	1494	1474	1249	1256	245	218	1379.	1376.	41.	48.	3.0	3.5
OTHER PHYSICAL SCIENTISTS	2724	187	162	158	137	29	25	171.	150.	1.	3.	0.6	2.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	725	706	566	559	159	147	646.	641.	27.	22.	4.2	3.4
ATMOSPHERIC SCIENTISTS	2731	31	29	14	15	17	14	20.	20.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	523	520	405	408	118	112	469.	473.	8.	8.	1.7	1.7
OCEANOGRAPHERS	2733	58	56	54	51	4	5	57.	55.	11.	7.	19.3	12.7
OTHER ENVIRONMENTAL SCIENTISTS	2734	113	101	93	85	20	16	101.	92.	7.	7.	6.9	7.6
MATHEMATICAL SCIENTISTS (TOTAL)	2740	5620	5260	3923	3716	1697	1544	4687.	4444.	51.	80.	1.1	1.8
MATHEMATICIANS	2741	4165	4080	2999	2976	1166	1104	3530.	3496.	37.	59.	1.0	1.7
COMPUTER SCIENTISTS	2742	1455	1180	924	740	531	440	1157.	949.	14.	20.	1.2	2.1
LIFE SCIENTISTS (TOTAL)	2750	5937	5630	4586	4290	1351	1340	5160.	4897.	168.	180.	3.3	3.7
AGRICULTURAL SCIENTISTS	2751	283	255	245	220	38	35	257.	241.	31.	31.	12.1	12.9
BIOLOGICAL SCIENTISTS	2752	3856	3907	3176	3148	680	759	3501.	3523.	122.	135.	3.5	3.8
MEDICAL SCIENTISTS	2753	761	687	363	298	398	389	500.	445.	9.	7.	1.8	1.6
OTHER LIFE SCIENTISTS	2754	1037	781	802	624	235	157	901.	688.	6.	7.	0.7	1.0
PSYCHOLOGISTS (TOTAL)	2760	3346	3382	2393	2391	953	991	2796.	2825.	39.	60.	1.4	2.1
SOCIAL SCIENTISTS (TOTAL)	2770	7540	7699	5629	5691	1911	2008	6426.	6516.	68.	89.	1.1	1.4
ECONOMISTS	2771	2248	2229	1656	1655	592	574	1900.	1893.	18.	23.	0.9	1.2
POLITICAL SCIENTISTS	2772	1741	1810	1406	1422	335	388	1562.	1594.	15.	16.	1.0	1.0
SOCIOLOGISTS	2773	2368	2483	1756	1816	612	667	2014.	2082.	24.	37.	1.2	1.8
OTHER SOCIAL SCIENTISTS	2774	1183	1177	811	798	372	379	951.	946.	11.	13.	1.2	1.4
TOTAL	2700	29469	28815	22219	21646	7250	7169	25378.	24894.	491.	595.	1.9	2.4

TABLE A1K

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PUBLIC BACHELOR'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	4263	4214	3944	3855	319	359
FIRST PROFESSIONAL	2220	74	72	50	52	24	20
MASTER'S	2230	3604	3651	2894	2824	710	827
BACHELOR'S OR THE EQUIVALENT	2240	614	651	368	373	244	278
TOTAL	2200	8555	8588	7256	7104	1299	1484

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	835	757	114	94	824	745	113	91	11	12	1	3
AERONAUTICAL & ASTRONAUTICAL	2611	86	84	12	16	84	81	11	13	2	3	1	3
CHEMICAL ENGINEERS	2612	2	2	0	0	2	2	0	0	0	0	0	0
CIVIL ENGINEERS	2613	147	132	25	19	144	129	25	19	3	3	0	0
ELECTRICAL ENGINEERS	2614	216	200	30	29	213	197	30	29	3	3	0	0
MECHANICAL ENGINEERS	2615	199	186	22	11	198	185	22	11	1	1	0	0
OTHER ENGINEERS	2616	185	153	25	19	183	151	25	19	2	2	0	0
PHYSICAL SCIENTISTS (TOTAL)	2620	1108	1102	129	139	1022	1014	99	109	86	88	30	30
ASTRONOMERS	2621	6	7	1	1	4	5	1	1	2	2	0	0
CHEMISTS	2622	583	592	81	100	520	529	57	74	63	63	24	26
PHYSICISTS	2623	419	412	39	31	406	395	35	28	13	17	4	3
OTHER PHYSICAL SCIENTISTS	2624	100	91	8	7	92	85	6	6	8	6	2	1
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	279	276	56	44	260	257	47	36	19	19	9	8
ATMOSPHERIC SCIENTISTS	2631	12	12	10	8	12	12	10	8	0	0	0	0
EARTH SCIENTISTS	2632	156	163	35	29	145	152	28	23	11	11	7	6
OCEANOGRAPHERS	2633	47	45	0	0	45	42	0	0	2	3	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	64	56	11	7	58	51	9	5	6	5	2	2
MATHEMATICAL SCIENTISTS (TOTAL)	2640	1369	1285	401	369	1130	1063	274	254	239	222	127	115
MATHEMATICIANS	2641	1024	1014	298	292	836	827	187	186	188	187	111	106
COMPUTER SCIENTISTS	2642	345	271	103	77	294	236	87	69	51	35	16	9
LIFE SCIENTISTS (TOTAL)	2650	1371	1256	196	274	927	888	103	165	444	368	93	109
AGRICULTURAL SCIENTISTS	2651	177	151	19	8	158	133	18	5	19	18	1	3
BIOLOGICAL SCIENTISTS	2652	839	843	107	175	670	674	58	112	169	169	49	63
MEDICAL SCIENTISTS	2653	84	47	11	27	25	21	11	25	59	26	0	2
OTHER LIFE SCIENTISTS	2654	271	215	59	64	74	60	16	23	197	155	43	41
PSYCHOLOGISTS (TOTAL)	2660	679	712	127	175	535	544	77	108	144	168	50	67
SOCIAL SCIENTISTS (TOTAL)	2670	1615	1716	276	389	1341	1397	211	280	274	319	65	109
ECONOMISTS	2671	389	416	55	73	363	368	50	66	26	48	5	7
POLITICAL SCIENTISTS	2672	408	424	39	70	356	365	37	63	52	59	2	7
SOCIOLOGISTS	2673	482	507	93	120	370	377	62	70	112	130	31	50
OTHER SOCIAL SCIENTISTS	2674	336	369	89	126	252	287	62	81	84	82	27	45
TOTAL	2600	7256	7104	1299	1484	6039	5908	924	1043	1217	196	375	441

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	949	851	835	757	114	94	868.	785.	19.	22.	2.2	2.8
AERONAUTICAL & ASTRONAUTICAL	2711	98	100	86	84	12	16	90.	89.	5.	5.	5.6	5.6
CHEMICAL ENGINEERS	2712	2	2	2	2	0	0	2.	2.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	172	151	147	132	25	19	153.	137.	3.	5.	2.0	3.6
ELECTRICAL ENGINEERS	2714	246	229	216	200	30	29	226.	209.	4.	4.	1.8	1.9
MECHANICAL ENGINEERS	2715	221	197	199	186	22	11	205.	190.	6.	6.	2.9	3.2
OTHER ENGINEERS	2716	210	172	185	153	25	19	191.	159.	1.	2.	0.5	1.3
PHYSICAL SCIENTISTS (TOTAL)	2720	1237	1241	1108	1102	129	139	1164.	1174.	38.	49.	3.3	4.2
ASTRONOMERS	2721	7	8	6	7	1	1	7.	8.	0.	0.	0.0	0.0
CHEMISTS	2722	664	692	583	592	81	100	616.	642.	22.	29.	3.6	4.5
PHYSICISTS	2723	458	443	419	412	39	31	440.	430.	15.	18.	3.4	4.2
OTHER PHYSICAL SCIENTISTS	2724	108	98	100	91	8	7	101.	94.	1.	3.	1.0	3.2
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	335	320	279	276	56	44	301.	295.	21.	15.	7.0	5.1
ATMOSPHERIC SCIENTISTS	2731	22	20	12	12	10	8	15.	16.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	191	192	156	163	35	29	171.	175.	6.	4.	3.5	2.3
OCEANOGRAPHERS	2733	47	45	47	45	0	0	47.	45.	8.	4.	17.0	8.9
OTHER ENVIRONMENTAL SCIENTISTS	2734	75	63	64	56	11	7	68.	59.	7.	7.	10.3	11.9
MATHEMATICAL SCIENTISTS (TOTAL)	2740	1770	1654	1369	1285	401	369	1549.	1433.	23.	30.	1.5	2.1
MATHEMATICIANS	2741	1322	1306	1024	1014	298	292	1163.	1132.	17.	23.	1.5	2.0
COMPUTER SCIENTISTS	2742	448	348	345	271	103	77	386.	301.	6.	7.	1.6	2.3
LIFE SCIENTISTS (TOTAL)	2750	1567	1530	1371	1256	196	274	1465.	1380.	98.	100.	6.7	7.2
AGRICULTURAL SCIENTISTS	2751	196	159	177	151	19	8	178.	154.	31.	31.	17.4	20.1
BIOLOGICAL SCIENTISTS	2752	946	1018	839	843	107	175	896.	921.	59.	62.	6.6	6.7
MEDICAL SCIENTISTS	2753	95	74	84	47	11	27	91.	63.	4.	0.	4.4	0.0
OTHER LIFE SCIENTISTS	2754	330	279	271	215	59	64	300.	242.	4.	7.	1.3	2.9
PSYCHOLOGISTS (TOTAL)	2760	806	887	679	712	127	175	739.	789.	21.	28.	2.8	3.5
SOCIAL SCIENTISTS (TOTAL)	2770	1891	2105	1615	1716	276	389	1733.	1833.	32.	43.	1.8	2.3
ECONOMISTS	2771	444	489	389	416	55	73	410.	438.	8.	11.	2.0	2.5
POLITICAL SCIENTISTS	2772	447	494	408	424	39	70	429.	441.	8.	5.	1.9	1.1
SOCIOLOGISTS	2773	575	627	482	507	93	120	525.	543.	15.	25.	2.9	4.6
OTHER SOCIAL SCIENTISTS	2774	425	495	336	369	89	126	369.	412.	1.	1.	0.3	0.2
TOTAL	2700	8555	8588	7256	7104	1299	1484	7819.	7689.	252.	288.	3.2	3.7

TABLE A1L

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PRIVATE BACHELOR'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	11456	11195	9894	9663	1562	1532
FIRST PROFESSIONAL	2220	540	451	181	154	359	297
MASTER'S	2230	7527	7286	4233	4142	3294	3144
BACHELOR'S OR THE EQUIVALENT	2240	1391	1295	655	583	736	712
TOTAL	2200	20914	20227	14963	14542	5951	5685

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	587	574	332	325	579	566	323	316	8	8	9	9
AERONAUTICAL & ASTRONAUTICAL	2611	53	55	9	14	52	54	9	14	1	1	0	0
CHEMICAL ENGINEERS	2612	17	16	11	9	16	15	10	8	1	1	1	1
CIVIL ENGINEERS	2613	106	85	67	31	106	84	64	31	0	1	3	0
ELECTRICAL ENGINEERS	2614	188	183	107	135	186	182	107	134	2	1	0	1
MECHANICAL ENGINEERS	2615	114	110	73	68	114	110	71	66	0	0	2	2
OTHER ENGINEERS	2616	109	125	65	68	105	121	62	63	4	4	3	5
PHYSICAL SCIENTISTS (TOTAL)	2620	2592	2566	604	581	2229	2214	442	424	363	352	162	157
ASTRONOMERS	2621	28	29	24	25	27	27	18	19	1	2	6	6
CHEMISTS	2622	1676	1647	353	351	1377	1355	231	230	299	292	122	121
PHYSICISTS	2623	830	844	206	187	779	795	177	162	51	49	29	25
OTHER PHYSICAL SCIENTISTS	2624	58	46	21	18	46	37	16	13	12	9	5	5
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	287	283	103	103	261	255	81	83	26	28	22	20
ATMOSPHERIC SCIENTISTS	2631	2	3	7	6	2	3	7	6	0	0	0	0
EARTH SCIENTISTS	2632	249	245	83	83	227	221	62	64	22	24	21	19
OCEANOGRAPHERS	2633	7	6	4	5	6	5	4	5	1	1	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	29	29	9	9	26	26	8	8	3	3	1	1
MATHEMATICAL SCIENTISTS (TOTAL)	2640	2554	2431	1296	1175	2017	1930	896	810	537	501	400	365
MATHEMATICIANS	2641	1975	1962	868	812	1539	1538	540	500	436	424	328	312
COMPUTER SCIENTISTS	2642	579	469	428	363	478	392	356	310	101	77	72	53
LIFE SCIENTISTS (TOTAL)	2650	3215	3034	1155	1066	2059	1996	686	634	1156	1038	469	432
AGRICULTURAL SCIENTISTS	2651	68	69	19	27	65	65	17	22	3	4	2	5
BIOLOGICAL SCIENTISTS	2652	2337	2305	573	584	1767	1741	296	304	570	564	277	280
MEDICAL SCIENTISTS	2653	279	251	387	362	182	153	335	291	97	98	92	71
OTHER LIFE SCIENTISTS	2654	531	409	176	93	45	37	38	17	486	372	138	76
PSYCHOLOGISTS (TOTAL)	2660	1714	1679	826	816	1272	1255	500	482	442	424	326	334
SOCIAL SCIENTISTS (TOTAL)	2670	4014	3975	1635	1619	3178	3149	1219	1194	836	826	416	425
ECONOMISTS	2671	1267	1239	537	501	1112	1087	472	443	155	152	65	58
POLITICAL SCIENTISTS	2672	998	998	296	318	868	868	235	255	130	130	61	63
SOCIOLOGISTS	2673	1274	1309	519	547	881	893	311	320	393	416	208	227
OTHER SOCIAL SCIENTISTS	2674	475	429	283	253	317	301	201	176	158	128	82	77
TOTAL	2600	1496.	14542	5951	5685	11595	11365	4147	3943	3368	3177	1804	1742

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	919	899	587	574	332	325	732.	732.	15.	12.	2.0	1.6
AERONAUTICAL & ASTRONAUTICAL	2711	62	69	53	55	9	14	52.	60.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	28	25	17	16	11	9	24.	23.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	173	116	106	85	67	31	142.	103.	0.	0.	0.0	0.0
ELECTRICAL ENGINEERS	2714	295	318	188	183	107	135	233.	247.	7.	5.	3.0	2.0
MECHANICAL ENGINEERS	2715	187	178	114	110	73	68	146.	144.	1.	1.	0.7	0.7
OTHER ENGINEERS	2716	174	193	109	125	65	68	136.	155.	7.	7.	5.1	4.5
PHYSICAL SCIENTISTS (TOTAL)	2720	3196	3147	2592	2566	604	581	2898.	2879.	66.	80.	2.3	2.8
ASTRONOMERS	2721	52	54	28	29	24	25	36.	37.	0.	0.	0.0	0.0
CHEMISTS	2722	2029	1998	1676	1647	353	351	1855.	1840.	40.	50.	2.2	2.7
PHYSICISTS	2723	1036	1031	830	844	206	187	938.	946.	26.	30.	2.8	3.2
OTHER PHYSICAL SCIENTISTS	2724	79	64	58	46	21	18	69.	56.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	390	386	287	283	103	103	345.	346.	6.	7.	1.7	2.0
ATMOSPHERIC SCIENTISTS	2731	9	9	2	3	7	6	4.	5.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	332	328	249	245	83	83	298.	298.	2.	4.	0.7	1.3
OCEANOGRAPHERS	2733	11	11	7	6	4	5	10.	10.	3.	3.	30.0	30.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	38	38	29	29	9	9	33.	33.	1.	1.	3.0	3.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	3850	3606	2554	2431	1296	1175	3138.	3011.	28.	50.	0.9	1.7
MATHEMATICIANS	2741	2843	2774	1975	1962	868	812	2367.	2363.	20.	36.	0.8	1.5
COMPUTER SCIENTISTS	2742	1007	832	579	469	428	363	772.	648.	8.	14.	1.0	2.2
LIFE SCIENTISTS (TOTAL)	2750	4370	4100	3215	3034	1155	1066	3695.	3517.	70.	80.	1.9	2.3
AGRICULTURAL SCIENTISTS	2751	87	96	68	69	19	27	79.	87.	0.	0.	0.0	0.0
BIOLOGICAL SCIENTISTS	2752	2910	2889	2337	2305	573	584	2605.	2602.	63.	73.	2.4	2.8
MEDICAL SCIENTISTS	2753	666	613	279	251	387	362	410.	382.	5.	7.	1.2	1.8
OTHER LIFE SCIENTISTS	2754	707	502	531	409	176	93	601.	446.	2.	0.	0.3	0.0
PSYCHOLOGISTS (TOTAL)	2760	2540	2495	1714	1679	826	816	2057.	2036.	16.	31.	0.9	1.5
SOCIAL SCIENTISTS (TOTAL)	2770	5649	5594	4014	3975	1635	1619	4693.	4683.	36.	45.	0.8	1.0
ECONOMISTS	2771	1804	1740	1267	1239	537	501	1490.	1455.	9.	12.	0.6	0.8
POLITICAL SCIENTISTS	2772	1294	1316	998	998	296	318	1132.	1154.	8.	10.	0.7	0.9
SOCIOLOGISTS	2773	1793	1856	1274	1309	519	547	1488.	1540.	9.	12.	0.6	0.8
OTHER SOCIAL SCIENTISTS	2774	758	682	475	429	283	253	582.	534.	10.	12.	1.7	2.2
TOTAL	2700	20914	20227	14963	14542	5951	5685	17559.	17205.	239.	306.	1.4	1.8

TABLE A1M

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
NON SCIENCE DEGREE-GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	7674	7343	5086	5021	2588	2322
FIRST PROFESSIONAL	2220	870	795	421	379	449	416
MASTER'S	2230	33872	32554	19905	19587	13967	12967
BACHELOR'S OR THE EQUIVALENT	2240	9834	8842	3975	3776	5859	5046
TOTAL	2200	52250	49534	29387	28763	22863	20771

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	3401	3283	2820	2624	3306	3216	2738	2562	95	67	82	62
AERONAUTICAL & ASTRONAUTICAL	2611	61	65	60	61	57	63	56	57	4	2	4	4
CHEMICAL ENGINEERS	2612	78	59	42	35	69	54	42	34	9	5	0	1
CIVIL ENGINEERS	2613	591	593	376	398	580	585	369	393	11	8	7	5
ELECTRICAL ENGINEERS	2614	1088	1011	907	844	1069	1000	887	823	19	11	20	21
MECHANICAL ENGINEERS	2615	769	739	543	488	751	724	526	478	18	15	17	10
OTHER ENGINEERS	2616	814	816	892	798	780	790	858	777	34	26	34	21
PHYSICAL SCIENTISTS (TOTAL)	2620	3709	3673	2102	1909	3238	3204	1683	1517	471	469	419	392
ASTRONOMERS	2621	86	97	92	78	79	89	85	71	7	8	7	7
CHEMISTS	2622	2058	2037	1195	1109	1692	1669	857	802	366	368	338	307
PHYSICISTS	2623	1280	1276	624	543	1206	1203	579	502	74	73	45	41
OTHER PHYSICAL SCIENTISTS	2624	285	263	191	179	261	243	162	142	24	20	29	37
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	677	692	322	332	609	629	275	284	68	63	47	48
ATMOSPHERIC SCIENTISTS	2631	23	23	32	24	21	20	31	24	2	3	1	0
EARTH SCIENTISTS	2632	549	553	216	215	492	502	177	180	57	51	39	35
OCEANOGRAPHERS	2633	40	42	26	36	38	39	24	31	2	3	2	5
OTHER ENVIRONMENTAL SCIENTISTS	2634	65	74	48	57	58	68	43	49	7	6	5	8
MATHEMATICAL SCIENTISTS (TOTAL)	2640	6191	5827	7451	6472	4705	4483	5372	4650	1486	1344	2079	1822
MATHEMATICIANS	2641	4648	4458	4828	4373	3505	3393	3193	2893	1143	1065	1635	1480
COMPUTER SCIENTISTS	2642	1543	1369	2623	2099	1200	1090	2179	1757	343	279	444	342
LIFE SCIENTISTS (TOTAL)	2650	7661	7555	3501	3225	4357	4352	1952	1838	3304	3203	1549	1387
AGRICULTURAL SCIENTISTS	2651	1022	1026	411	414	968	978	337	343	54	48	74	71
BIOLOGICAL SCIENTISTS	2652	3852	3864	1766	1627	2838	2848	1147	1042	1014	1016	619	585
MEDICAL SCIENTISTS	2653	1162	1135	678	685	262	256	284	304	900	879	394	381
OTHER LIFE SCIENTISTS	2654	1625	1530	646	499	289	270	184	149	1336	1260	462	350
PSYCHOLOGISTS (TOTAL)	2660	2680	2718	2416	2287	1792	1816	1428	1363	888	902	988	924
SOCIAL SCIENTISTS (TOTAL)	2670	5068	5015	4251	3922	4096	4030	3259	3013	972	985	992	909
ECONOMISTS	2671	1026	996	1061	946	908	882	931	815	118	114	130	131
POLITICAL SCIENTISTS	2672	1181	1159	720	635	1017	999	598	534	164	160	122	101
SOCIOLOGISTS	2673	1536	1495	1267	1218	1125	1084	841	818	411	411	426	400
OTHER SOCIAL SCIENTISTS	2674	1325	1365	1203	1123	1046	1065	889	846	279	300	314	277
TOTAL	2600	29387	28763	22863	20771	22103	21730	16707	15227	7284	7033	6156	5544

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	6221	5907	3401	3283	2820	2624	4604.	4419.	3.	4.	0.1	0.1
AERONAUTICAL & ASTRONAUTICAL	2711	121	126	61	65	60	61	79.	85.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	120	94	78	59	42	35	99.	75.	1.	1.	1.0	1.3
CIVIL ENGINEERS	2713	967	991	591	593	376	398	753.	770.	1.	2.	0.1	0.3
ELECTRICAL ENGINEERS	2714	1995	1855	1088	1011	907	844	1483.	1377.	1.	1.	0.1	0.1
MECHANICAL ENGINEERS	2715	1312	1227	769	739	543	488	1007.	956.	1.	1.	0.1	0.1
OTHER ENGINEERS	2716	1706	1614	814	816	892	798	1183.	1155.	1.	1.	0.1	0.1
PHYSICAL SCIENTISTS (TOTAL)	2720	5811	5582	3709	3673	2102	1909	4712.	4621.	17.	23.	0.4	0.5
ASTRONOMERS	2721	178	175	86	97	92	78	124.	130.	1.	1.	0.8	0.8
CHEMISTS	2722	3253	3146	2058	2037	1195	1109	2642.	2590.	12.	17.	0.5	0.7
PHYSICISTS	2723	1904	1819	1280	1276	624	543	1577.	1554.	4.	6.	0.3	0.4
OTHER PHYSICAL SCIENTISTS	2724	476	442	285	263	191	179	369.	348.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	999	1024	677	692	322	332	841.	863.	1.	1.	0.1	0.1
ATMOSPHERIC SCIENTISTS	2731	55	47	23	23	32	24	43.	36.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	765	768	549	553	216	215	664.	669.	1.	1.	0.2	0.1
OCEANOGRAPHERS	2733	66	78	40	42	26	36	52.	63.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	113	131	65	74	48	57	82.	95.	0.	0.	0.0	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	13642	12299	6191	5827	7451	6472	9228.	8556.	21.	26.	0.2	0.3
MATHEMATICIANS	2741	9476	8831	4648	4458	4828	4373	6722.	6401.	8.	13.	0.1	0.2
COMPUTER SCIENTISTS	2742	4166	3468	1543	1369	2623	2099	2506.	2155.	13.	14.	0.5	0.6
LIFE SCIENTISTS (TOTAL)	2750	11162	10786	7661	7555	3501	3225	9265.	9034.	21.	36.	0.2	0.4
AGRICULTURAL SCIENTISTS	2751	1433	1440	1022	1026	411	414	1207.	1210.	1.	2.	0.1	0.2
BIOLOGICAL SCIENTISTS	2752	5618	5491	3852	3864	1766	1627	4748.	4692.	20.	31.	0.4	0.7
MEDICAL SCIENTISTS	2753	1840	1820	1162	1135	678	685	1414.	1390.	0.	1.	0.0	0.1
OTHER LIFE SCIENTISTS	2754	2271	2029	1625	1530	646	499	1896.	1741.	1.	2.	0.1	0.1
PSYCHOLOGISTS (TOTAL)	2760	5096	5005	2680	2718	2416	2287	3682.	3658.	4.	9.	0.1	0.2
SOCIAL SCIENTISTS (TOTAL)	2770	9319	8937	5068	5015	4251	3922	6896.	6687.	7.	12.	0.1	0.2
ECONOMISTS	2771	2087	1942	1026	996	1061	946	1490.	1406.	1.	2.	0.1	0.1
POLITICAL SCIENTISTS	2772	1901	1794	1181	1159	720	635	1498.	1451.	0.	2.	0.0	0.1
SOCIOLOGISTS	2773	2803	2713	1536	1495	1267	1218	2116.	2054.	2.	5.	0.1	0.2
OTHER SOCIAL SCIENTISTS	2774	2528	2488	1325	1365	1203	1123	1792.	1776.	4.	4.	0.2	0.2
TOTAL	2700	52250	49534	29387	28763	22863	20771	39228.	37837.	74.	113.	0.2	0.3

TABLE A1N

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PUBLIC NON SCIENCE DEGREE-GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	7059	6750	4644	4570	2415	2180
FIRST PROFESSIONAL	2220	824	753	409	371	415	382
MASTER'S	2230	31948	30791	18827	18565	13121	12226
BACHELOR'S OR THE EQUIVALENT	2240	9465	8529	3798	3622	5667	4907
TOTAL	2200	49296	46823	27678	27128	21618	19695

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	3316	3219	2727	2571	3234	3156	2646	2510	82	63	81	61
AERONAUTICAL & ASTRONAUTICAL	2611	57	61	59	60	53	59	55	56	4	2	4	4
CHEMICAL ENGINEERS	2612	74	57	41	35	65	53	41	34	9	4	0	1
CIVIL ENGINEERS	2613	582	580	367	388	571	573	360	383	11	7	7	5
ELECTRICAL ENGINEERS	2614	1058	996	867	828	1044	985	848	808	14	11	19	20
MECHANICAL ENGINEERS	2615	741	717	511	468	729	703	494	458	12	14	17	10
OTHER ENGINEERS	2616	804	808	882	792	772	783	848	771	32	25	34	21
PHYSICAL SCIENTISTS (TOTAL)	2620	3467	3434	1948	1785	3031	3001	1568	1428	436	433	380	357
ASTRONOMERS	2621	80	91	91	76	76	86	84	69	4	5	7	7
CHEMISTS	2622	1918	1895	1107	1040	1579	1555	802	761	339	340	305	279
PHYSICISTS	2623	1203	1203	572	505	1132	1133	528	464	71	70	44	41
OTHER PHYSICAL SCIENTISTS	2624	266	245	178	164	244	227	154	134	22	18	24	30
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	644	659	309	315	582	600	268	273	62	59	41	42
ATMOSPHERIC SCIENTISTS	2631	23	23	32	24	21	20	31	24	2	3	1	0
EARTH SCIENTISTS	2632	523	529	203	202	470	479	170	173	53	50	33	29
OCEANOGRAPHERS	2633	40	41	26	36	38	38	24	31	2	3	2	5
OTHER ENVIRONMENTAL SCIENTISTS	2634	58	66	48	53	53	63	43	45	5	3	5	8
MATHEMATICAL SCIENTISTS (TOTAL)	2640	5852	5516	7121	6177	4460	4256	5151	4446	1392	1260	1970	1731
MATHEMATICIANS	2641	4379	4202	4612	4172	3314	3208	3061	2763	1065	994	1551	1409
COMPUTER SCIENTISTS	2642	1473	1314	2509	2005	1146	1048	2090	1683	327	266	419	322
LIFE SCIENTISTS (TOTAL)	2650	7167	7090	3255	3001	4075	4088	1851	1758	3092	3002	1404	1243
AGRICULTURAL SCIENTISTS	2651	966	975	402	407	915	929	329	337	51	46	73	70
BIOLOGICAL SCIENTISTS	2652	3542	3563	1632	1510	2624	2644	1073	1062	918	919	559	528
MEDICAL SCIENTISTS	2653	1125	1087	640	617	254	248	276	294	871	839	366	323
OTHER LIFE SCIENTISTS	2654	1534	1465	581	467	282	267	152	145	1252	1198	406	322
PSYCHOLOGISTS (TOTAL)	2660	2497	2534	2269	2154	1673	1698	1339	1279	824	836	930	875
SOCIAL SCIENTISTS (TOTAL)	2670	4735	4676	3989	3692	3837	3765	3069	2838	898	911	920	854
ECONOMISTS	2671	929	896	972	869	823	792	855	750	106	104	117	119
POLITICAL SCIENTISTS	2672	1102	1079	672	594	953	932	557	498	149	147	115	96
SOCIOLOGISTS	2673	1434	1387	1179	1143	1054	1011	781	763	380	376	398	380
OTHER SOCIAL SCIENTISTS	2674	1270	1314	1166	1086	1007	1030	876	827	263	284	290	259
TOTAL	2600	27678	27128	21618	19695	20492	20564	15892	14532	6786	6564	5726	5163

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	6043	5790	3316	3219	2727	2571	4466.	4332.	3.	3.	0.1	0.1
AERONAUTICAL & ASTRONAUTICAL	2711	116	121	57	61	59	60	75.	81.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	115	92	74	57	41	35	94.	73.	1.	1.	1.1	1.4
CIVIL ENGINEERS	2713	949	968	582	580	367	388	736.	752.	0.	0.	0.0	0.0
ELECTRICAL ENGINEERS	2714	1925	1824	1058	996	867	828	1433.	1355.	1.	1.	0.1	0.1
MECHANICAL ENGINEERS	2715	1252	1185	741	717	511	468	961.	925.	1.	1.	0.1	0.1
OTHER ENGINEERS	2716	1686	1600	804	808	882	792	1168.	1145.	1.	1.	0.1	0.1
PHYSICAL SCIENTISTS (TOTAL)	2720	5415	5219	3467	3434	1948	1785	4372.	4307.	6.	11.	0.1	0.3
ASTRONOMERS	2721	171	167	80	91	91	76	117.	122.	1.	1.	0.9	0.8
CHEMISTS	2722	3025	2935	1918	1895	1107	1040	2446.	2407.	3.	6.	0.1	0.2
PHYSICISTS	2723	1775	1708	1203	1203	572	505	1467.	1457.	3.	4.	0.2	0.3
OTHER PHYSICAL SCIENTISTS	2724	444	409	266	245	178	164	342.	321.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	953	974	644	659	309	315	800.	821.	1.	1.	0.1	0.1
ATMOSPHERIC SCIENTISTS	2731	55	47	23	23	32	24	43.	36.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	726	731	523	529	203	202	629.	636.	1.	1.	0.2	0.2
OCEANOGRAPHERS	2733	66	77	40	41	26	36	52.	62.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	106	119	58	66	48	53	75.	87.	0.	0.	0.0	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	12973	11693	5852	5516	7121	6177	8709.	8102.	17.	21.	0.2	0.3
MATHEMATICIANS	2741	8991	8374	4379	4202	4612	4172	6339.	6042.	4.	8.	0.1	0.1
COMPUTER SCIENTISTS	2742	3982	3319	1473	1314	2509	2005	2369.	2059.	13.	14.	0.5	0.7
LIFE SCIENTISTS (TOTAL)	2750	10422	10091	7167	7090	3255	3001	8639.	8463.	7.	17.	0.1	0.2
AGRICULTURAL SCIENTISTS	2751	1368	1382	966	975	402	407	1145.	1154.	0.	1.	0.0	0.1
BIOLOGICAL SCIENTISTS	2752	5174	5073	3542	3563	1632	1510	4365.	4325.	7.	13.	0.2	0.3
MEDICAL SCIENTISTS	2753	1765	1704	1125	1087	640	617	1361.	1326.	0.	1.	0.0	0.1
OTHER LIFE SCIENTISTS	2754	2115	1932	1534	1465	581	467	1769.	1658.	1.	2.	0.1	0.1
PSYCHOLOGISTS (TOTAL)	2760	4766	4688	2497	2534	2269	2154	3432.	3419.	4.	8.	0.1	0.2
SOCIAL SCIENTISTS (TOTAL)	2770	8724	8368	4735	4676	3989	3692	6413.	6228.	5.	10.	0.1	0.2
ECONOMISTS	2771	1901	1765	929	896	972	869	1338.	1265.	1.	2.	0.1	0.2
POLITICAL SCIENTISTS	2772	1774	1673	1102	1079	672	594	1391.	1349.	0.	2.	0.0	0.1
SOCIOLOGISTS	2773	2613	2530	1434	1387	1179	1143	1961.	1900.	0.	2.	0.0	0.1
OTHER SOCIAL SCIENTISTS	2774	2436	2400	1270	1314	1166	1086	1723.	1714.	4.	4.	0.2	0.2
TOTAL	2700	49296	46823	27678	27128	21618	19695	36832.	35671.	42.	71.	0.1	0.2

TABLE A10

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
PRIVATE NON SCIENCE DEGREE-GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	615	593	442	451	173	142
FIRST PROFESSIONAL	2220	46	42	12	8	34	34
MASTER'S	2230	1924	1763	1078	1022	846	741
BACHELOR'S OR THE EQUIVALENT	2240	369	313	177	154	192	159
TOTAL	2200	2954	2711	1709	1635	1245	1076

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	85	64	93	53	72	60	92	52	13	4	1	1
AERONAUTICAL & ASTRONAUTICAL	2611	4	4	1	1	4	4	1	1	0	0	0	0
CHEMICAL ENGINEERS	2612	4	2	1	0	4	1	1	0	0	1	0	0
CIVIL ENGINEERS	2613	9	13	9	10	9	12	9	10	0	1	0	0
ELECTRICAL ENGINEERS	2614	30	15	40	16	25	15	39	15	5	0	1	1
MECHANICAL ENGINEERS	2615	28	22	32	20	22	21	32	20	6	1	0	0
OTHER ENGINEERS	2616	10	8	10	6	8	7	10	6	2	1	0	0
PHYSICAL SCIENTISTS (TOTAL)	2620	242	239	154	124	207	203	115	89	35	36	39	35
ASTRONOMERS	2621	6	6	1	2	3	3	1	2	3	3	0	0
CHEMISTS	2622	140	142	88	69	113	114	55	41	27	28	33	28
PHYSICISTS	2623	77	73	52	38	74	70	51	38	3	3	1	0
OTHER PHYSICAL SCIENTISTS	2624	19	18	13	15	17	16	8	8	2	2	5	7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	33	33	13	17	27	29	7	11	6	4	6	6
ATMOSPHERIC SCIENTISTS	2631	0	0	0	0	0	0	0	0	0	0	0	0
EARTH SCIENTISTS	2632	26	24	13	13	22	23	7	7	4	1	6	6
OCEANOGRAPHERS	2633	0	1	0	0	0	1	0	0	0	0	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	7	8	0	4	5	5	0	4	2	3	0	0
MATHEMATICAL SCIENTISTS (TOTAL)	2640	339	311	330	295	245	227	221	204	94	84	109	91
MATHEMATICIANS	2641	269	256	216	201	191	185	132	130	78	71	84	71
COMPUTER SCIENTISTS	2642	70	55	114	94	54	42	89	74	16	13	25	20
LIFE SCIENTISTS (TOTAL)	2650	494	465	246	224	282	264	101	80	212	201	145	144
AGRICULTURAL SCIENTISTS	2651	56	51	9	7	53	49	8	6	3	2	1	1
BIOLOGICAL SCIENTISTS	2652	310	301	134	117	214	204	74	60	96	97	60	57
MEDICAL SCIENTISTS	2653	37	48	38	68	8	8	10	10	29	40	28	58
OTHER LIFE SCIENTISTS	2654	91	65	65	32	7	3	9	4	84	62	56	28
PSYCHOLOGISTS (TOTAL)	2660	183	184	147	133	119	118	89	84	64	66	58	49
SOCIAL SCIENTISTS (TOTAL)	2670	333	339	262	230	259	265	190	175	74	74	72	55
ECONOMISTS	2671	97	100	89	77	85	90	76	65	12	10	13	12
POLITICAL SCIENTISTS	2672	79	80	48	41	64	67	41	36	15	13	7	5
SOCIOLOGISTS	2673	102	108	88	75	71	73	60	55	31	35	28	20
OTHER SOCIAL SCIENTISTS	2674	55	51	37	37	39	35	13	19	16	16	24	18
TOTAL	2600	1709	1635	1245	1076	1211	1166	815	695	498	469	430	381

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	178	117	85	64	93	53	137.	87.	1.	2.	0.7	2.3
AERONAUTICAL & ASTRONAUTICAL	2711	5	5	4	4	1	1	4.	4.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	5	2	4	2	1	0	5.	2.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	18	23	9	13	9	10	17.	18.	1.	2.	5.9	11.1
ELECTRICAL ENGINEERS	2714	70	31	30	15	40	16	50.	22.	0.	0.	0.0	0.0
MECHANICAL ENGINEERS	2715	60	42	28	22	32	20	46.	30.	0.	0.	0.0	0.0
OTHER ENGINEERS	2716	20	14	10	8	10	6	15.	10.	0.	0.	0.0	0.0
PHYSICAL SCIENTISTS (TOTAL)	2720	396	363	242	239	154	124	340.	314.	11.	12.	3.2	3.8
ASTRONOMERS	2721	7	8	6	6	1	2	7.	8.	0.	0.	0.0	0.0
CHEMISTS	2722	228	211	140	142	88	69	196.	183.	9.	10.	4.6	5.5
PHYSICISTS	2723	129	111	77	73	52	38	110.	96.	1.	2.	0.9	2.1
OTHER PHYSICAL SCIENTISTS	2724	32	33	19	18	13	15	27.	27.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	46	50	33	33	13	17	42.	42.	0.	0.	0.0	0.0
ATMOSPHERIC SCIENTISTS	2731	0	0	0	0	0	0	0.	0.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	39	37	26	24	13	13	35.	33.	0.	0.	0.0	0.0
OCEANOGRAPHERS	2733	0	1	0	1	0	0	0.	1.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	7	12	7	8	0	4	7.	8.	0.	0.	0.0	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	669	606	339	311	330	295	519.	454.	4.	5.	0.8	1.1
MATHEMATICIANS	2741	485	457	269	256	216	201	383.	358.	4.	5.	1.0	1.4
COMPUTER SCIENTISTS	2742	184	149	70	55	114	94	136.	96.	0.	0.	0.0	0.0
LIFE SCIENTISTS (TOTAL)	2750	740	689	494	465	246	224	625.	571.	14.	19.	2.2	3.3
AGRICULTURAL SCIENTISTS	2751	65	58	56	51	9	7	62.	55.	0.	0.	0.0	0.0
BIOLOGICAL SCIENTISTS	2752	444	418	310	301	134	117	383.	368.	13.	18.	3.4	4.9
MEDICAL SCIENTISTS	2753	75	116	37	48	38	68	53.	64.	0.	0.	0.0	0.0
OTHER LIFE SCIENTISTS	2754	156	97	91	65	65	32	127.	84.	0.	0.	0.0	0.0
PSYCHOLOGISTS (TOTAL)	2760	330	317	183	184	147	133	250.	238.	0.	1.	0.0	0.4
SOCIAL SCIENTISTS (TOTAL)	2770	595	569	333	339	262	230	483.	459.	2.	3.	0.4	0.7
ECONOMISTS	2771	186	177	97	100	89	77	152.	141.	0.	0.	0.0	0.0
POLITICAL SCIENTISTS	2772	127	121	79	80	48	41	107.	102.	0.	0.	0.0	0.0
SOCIOLOGISTS	2773	190	183	102	108	88	75	155.	154.	2.	2.	1.3	1.3
OTHER SOCIAL SCIENTISTS	2774	92	88	55	51	37	37	69.	62.	0.	0.	0.0	0.0
TOTAL	2700	2954	2711	1709	1635	1245	1076	2396.	2166.	32.	42.	1.3	1.9

TABLE A1P

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1983
FEDERALLY FUNDED RESEARCH & DEVELOPMENT CENTERS
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1983 AND JANUARY 1982

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982
DOCTOR'S	2210	6301	6294	6148	6146	153	148
FIRST PROFESSIONAL	2220	36	41	30	37	6	4
MASTER'S	2230	3637	3653	3498	3510	139	143
BACHELOR'S OR THE EQUIVALENT	2240	5125	5153	4895	4902	230	251
TOTAL	2200	15099	15141	14571	14595	528	546

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1983	TOTAL FULL TIME 1982	TOTAL PART TIME 1983	TOTAL PART TIME 1982	MEN FULL TIME 1983	MEN FULL TIME 1982	MEN PART TIME 1983	MEN PART TIME 1982	WOMEN FULL TIME 1983	WOMEN FULL TIME 1982	WOMEN PART TIME 1983	WOMEN PART TIME 1982
ENGINEERS (TOTAL)	2610	6385	6418	153	140	6200	6234	121	112	185	184	32	28
AERONAUTICAL & ASTRONAUTICAL	2611	234	235	9	9	228	229	9	9	6	6	0	0
CHEMICAL ENGINEERS	2612	266	276	9	9	253	261	7	8	13	15	2	1
CIVIL ENGINEERS	2613	244	240	4	3	240	233	3	3	4	7	1	0
ELECTRICAL ENGINEERS	2614	2200	2208	46	44	2142	2157	42	42	58	51	4	2
MECHANICAL ENGINEERS	2615	1497	1524	38	36	1475	1501	35	33	22	23	3	3
OTHER ENGINEERS	2616	1944	1935	47	39	1862	1853	25	17	82	82	22	22
PHYSICAL SCIENTISTS (TOTAL)	2620	5253	5248	182	202	4981	4970	141	155	272	278	41	47
ASTRONOMERS	2621	153	138	3	2	144	131	3	2	9	7	0	0
CHEMISTS	2622	1333	1366	40	45	1209	1235	17	19	124	131	23	26
PHYSICISTS	2623	3363	3337	121	136	3240	3214	105	118	123	123	16	18
OTHER PHYSICAL SCIENTISTS	2624	404	407	18	19	388	390	16	16	16	17	2	3
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	707	725	42	43	608	636	23	28	99	89	19	15
ATMOSPHERIC SCIENTISTS	2631	191	167	6	4	170	152	2	2	21	15	4	2
EARTH SCIENTISTS	2632	216	238	23	23	189	212	14	18	27	26	9	5
OCEANOGRAPHERS	2633	19	22	0	0	17	20	0	0	2	2	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	281	298	13	16	232	252	7	8	49	46	6	8
MATHEMATICAL SCIENTISTS (TOTAL)	2640	1426	1414	100	108	1136	1100	52	63	290	314	48	45
MATHEMATICIANS	2641	675	687	30	33	549	543	16	19	126	144	14	14
COMPUTER SCIENTISTS	2642	751	727	70	75	587	557	36	44	164	170	34	31
LIFE SCIENTISTS (TOTAL)	2650	707	696	46	44	505	501	18	16	202	195	28	28
AGRICULTURAL SCIENTISTS	2651	3	4	0	0	3	3	0	0	0	1	0	0
BIOLOGICAL SCIENTISTS	2652	519	508	33	32	372	368	13	11	147	140	20	21
MEDICAL SCIENTISTS	2653	58	52	5	4	45	42	4	4	13	10	1	0
OTHER LIFE SCIENTISTS	2654	127	132	8	8	85	88	1	1	42	44	7	7
PSYCHOLOGISTS (TOTAL)	2660	5	4	1	0	3	3	0	0	2	1	1	0
SOCIAL SCIENTISTS (TOTAL)	2670	88	90	4	9	78	78	1	3	10	12	3	6
ECONOMISTS	2671	57	60	1	4	53	53	1	3	4	7	0	1
POLITICAL SCIENTISTS	2672	15	11	1	1	13	11	0	0	2	0	1	1
SOCIOLOGISTS	2673	2	3	1	1	2	2	0	0	0	1	1	1
OTHER SOCIAL SCIENTISTS	2674	14	16	1	3	10	12	0	0	4	4	1	3
TOTAL	2600	14571	14595	528	546	13511	13522	356	377	1060	1073	172	169

ITEM 3. DISCIPLINES		TOTAL 1983	TOTAL 1982	FULL TIME 1983	FULL TIME 1982	PART TIME 1983	PART TIME 1982	TOTAL FTE'S 1983	TOTAL FTE'S 1982	FTE'S DEVOTED TO R&D 1983	FTE'S DEVOTED TO R&D 1982	% TOTAL FTE'S DEVOTED TO R&D 1983	% TOTAL FTE'S DEVOTED TO R&D 1982
ENGINEERS (TOTAL)	2710	6538	6558	6385	6418	153	140	6492.	6521.	6485.	6520.	99.9	100.0
AERONAUTICAL & ASTRONAUTICAL	2711	243	244	234	235	9	9	243.	244.	243.	244.	100.0	100.0
CHEMICAL ENGINEERS	2712	275	285	266	276	9	9	270.	281.	270.	281.	100.0	100.0
CIVIL ENGINEERS	2713	248	243	244	240	4	3	246.	241.	246.	240.	100.0	99.6
ELECTRICAL ENGINEERS	2714	2246	2252	2200	2208	46	44	2230.	2243.	2227.	2243.	99.9	100.0
MECHANICAL ENGINEERS	2715	1535	1560	1497	1524	38	36	1524.	1549.	1520.	1549.	99.7	100.0
OTHER ENGINEERS	2716	1991	1974	1944	1935	47	39	1979.	1963.	1979.	1963.	100.0	100.0
PHYSICAL SCIENTISTS (TOTAL)	2720	5435	5450	5253	5248	182	202	5347.	5349.	5347.	5349.	100.0	100.0
ASTRONOMERS	2721	156	140	153	138	3	2	155.	139.	155.	139.	100.0	100.0
CHEMISTS	2722	1373	1411	1333	1366	40	45	1345.	1384.	1345.	1384.	100.0	100.0
PHYSICISTS	2723	3484	3473	3363	3337	121	136	3434.	3409.	3434.	3409.	100.0	100.0
OTHER PHYSICAL SCIENTISTS	2724	422	426	404	407	18	19	414.	418.	414.	418.	100.0	100.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	749	768	707	725	42	43	729.	747.	729.	747.	100.0	100.0
ATMOSPHERIC SCIENTISTS	2731	197	171	191	167	6	4	195.	169.	195.	169.	100.0	100.0
EARTH SCIENTISTS	2732	239	261	216	238	23	23	229.	250.	229.	250.	100.0	100.0
OCEANOGRAPHERS	2733	19	22	19	22	0	0	18.	22.	18.	22.	100.0	100.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	294	314	281	298	13	16	287.	306.	287.	306.	100.0	100.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	1526	1522	1426	1414	100	108	1480.	1473.	1480.	1473.	100.0	100.0
MATHEMATICIANS	2741	705	720	675	687	30	33	696.	708.	696.	708.	100.0	100.0
COMPUTER SCIENTISTS	2742	821	802	751	727	70	75	785.	766.	785.	766.	100.0	100.0
LIFE SCIENTISTS (TOTAL)	2750	753	740	707	696	46	44	731.	721.	729.	721.	99.7	100.0
AGRICULTURAL SCIENTISTS	2751	3	4	3	4	0	0	3.	4.	3.	4.	100.0	100.0
BIOLOGICAL SCIENTISTS	2752	552	540	519	508	33	32	536.	526.	534.	525.	99.6	99.8
MEDICAL SCIENTISTS	2753	63	56	58	52	5	4	60.	54.	60.	54.	100.0	100.0
OTHER LIFE SCIENTISTS	2754	135	140	127	132	8	8	133.	138.	133.	138.	100.0	100.0
PSYCHOLOGISTS (TOTAL)	2760	6	4	5	4	1	0	6.	4.	6.	4.	100.0	100.0
SOCIAL SCIENTISTS (TOTAL)	2770	92	99	88	90	4	9	91.	95.	91.	93.	100.0	97.9
ECONOMISTS	2771	58	64	57	60	1	4	58.	63.	58.	62.	100.0	98.4
POLITICAL SCIENTISTS	2772	16	12	15	11	1	1	16.	12.	16.	12.	100.0	100.0
SOCIOLOGISTS	2773	3	4	2	3	1	1	3.	4.	3.	4.	100.0	100.0
OTHER SOCIAL SCIENTISTS	2774	15	19	14	16	1	3	15.	18.	15.	17.	100.0	94.4
TOTAL	2700	15099	15141	14571	14595	528	546	14875.	14911.	14866.	14908.	99.9	100.0

section d

university-administered ffrdc's: january 1983

department of defense

Center for Naval Analyses (University of Rochester).

Lincoln Laboratory (Massachusetts Institute of Technology).

department of energy

Ames Laboratory (Iowa State University of Science and Technology).

Argonne National Laboratory (University of Chicago and Argonne Universities Association).

Brookhaven National Laboratory (Associated Universities, Inc.).

E. O. Lawrence Berkeley Laboratory (University of California).

E. O. Lawrence Livermore Laboratory (University of California).

Los Alamos Scientific Laboratory (University of California).

Fermi National Accelerator Laboratory (Universities Research Association).

Oak Ridge Institute of Nuclear Studies (Oak Ridge Associated Universities).

Plasma Physics Laboratory (Princeton University).

Stanford Linear Accelerator Center (Stanford University).

national aeronautics and space administration

Jet Propulsion Laboratory (California Institute of Technology).

national science foundation

Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.).

National Astronomy and Ionosphere Center (Cornell University).

Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.).

National Center for Atmospheric Research (University Corporation for Atmospheric Research).

National Radio Astronomy Observatory (Associated Universities, Inc).

Sacramento Peak Observatory (Association of Universities for Research in Astronomy, Inc.).

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NATIONAL SCIENCE FOUNDATION
WASHINGTON D.C. 20550

Re: Survey of Scientific and Engineering
Personnel Employed at Universities and
Colleges, January 1983

Dear Colleague:

This survey is one element of the system that makes up the Integrated Data Base covering scientific and engineering (S/E) resources at academic and selected nonprofit institutions. This data base is managed by the Universities and Nonprofit Institutions Studies Group (UNISG), Mrs. Penny D. Foster, Study Director. Information for the survey is solicited under the authority of the National Science Foundation Act of 1950, as amended. Your participation in it is entirely voluntary, and failure to participate will not affect your institution adversely in any way. Information provided is for statistical use only.

This package contains:

January 1983 S/E Personnel Survey Form 724A, with instructions Form 724B
Facsimile
NSF/NCES "Crosswalk" defining S/E fields
Postcard to notify NSF of receipt of package
Envelope for mailing completed form

THE JANUARY 1983 SURVEY FORM 724A WITH INSTRUCTIONS FORM 724B

The 1983 form requests the same information as the 1982 form. In an effort to make completing the form easier, we have improved the format of the questions but their content is the same as on the 1982 form. The instructions for completing have been clarified. A facsimile is attached that shows data received from your institution.

NSF/NCES CROSSWALK

The crosswalk connects NSF's S/E fields with the National Center for Education Statistics Classification of Instructional Programs (NCES 81-323). It is provided to aid respondents whose institutional recordkeeping systems are organized according to NCES classifications.

POSTCARD

As soon as you receive this survey package, please let us know by filling out and mailing the postcard enclosed, stating the name and telephone number of the person completing the survey form.

RETURN ENVELOPE

A return, postage-paid envelope is provided for your use in sending in the completed survey form.

NSF CONTACT

If questions arise when completing the survey form, please call Ms. Judith Coakley or Ms. Esther Gist at (202) 634-4673. Thank you for your efforts in providing timely and meaningful statistics to NSF.

Penny D. Foster

Penny D. Foster
Study Director
Universities and Nonprofit Institutions
Studies Group
Division of Science Resources Studies

Enclosures

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NSF FORM 724A (11-82)

OMB No. 3145-0074
Exp. Date: 12/31/83

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING PERSONNEL EMPLOYED AT UNIVERSITIES AND COLLEGES, JANUARY 1983

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W., Room L-602
Washington, D.C. 20550—Attn: UNISG

This information is solicited under the authority of Section 3 (a) (6) of the National Science Foundation Act of 1950, as amended (42 U.S. Code 1862 (a) (6)). Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

Please correct if name or address has changed.

This survey requests scientific and engineering (S/E) employment data according to institutional recordkeeping conventions. **The completed 1983 questionnaire should be returned by March 15, 1983.** Your prompt cooperation will be appreciated. If you determine, however, that you cannot respond by March 15, please notify NSF and request an extension of time.

Please read the enclosed instructions before completing this form. If you have any questions, contact Ms. Judith Coakley or Ms. Esther Gist (202-634-4673). Please complete all columns; estimates by academic officials will be better than NSF estimates.

All entries should be in whole numbers; please do not enter decimals or fractions, except in item 3, columns 2 and 3, where two decimal places are optional.

SURVEY POPULATION

Include data for ALL ORGANIZATIONAL UNITS OF YOUR INSTITUTION THAT EMPLOY SCIENTISTS AND ENGINEERS, such as regional campuses, computer centers, medical schools, agricultural experiment stations, and associated research units. Also include any hospital or clinic owned, operated, or controlled by your university and integrated operationally with the clinical programs of your medical schools.

Federally Funded Research and Development Centers (FFRDC's)

Separate forms have been mailed directly to all FFRDC's administered by academic institutions. A list of these centers appears on page 3 of the Instructions and Definitions.

INSTITUTIONAL CLASSIFICATION

Highest degree granted in the sciences or engineering during 1982-83	Check one	One example of a science or engineering field in which highest degree was awarded	Check primary administrative control of your institution	
Doctor's degree, e.g., Ph.D., D. Eng., or D.E.S.	☐		Federal	☐
First-professional degree, e.g., M.D., D.D.S., D.V.M., etc.	☐		State	☐
Master's degree	☐			
Bachelor's degree	☐		Local	☐
Associate or other 2-year award	☐			
No degrees granted in the sciences or engineering	☐		Private	☐

Item 1.	Total number of scientists and engineers by highest earned degree and employment status: January 1983			
HIGHEST EARNED DEGREE		HEADCOUNTS		
		TOTAL (1)	FULL TIME (2)	PART TIME (3)
a. Doctor's degree, e.g., Ph. D., D. Eng., or D.E.S.	2210			
b. First-professional degree, e.g., M.D., D.D.S., D.V.M., etc.	2220			
c. Master's degree	2230			
d. Bachelor's degree or the equivalent	2240			
e. Total (sum of a through d)	2200			

NOTE: To ensure proper data comparability between item 1, line 2200, and items 2 and 3:

a) Line 2200, column 1 should equal item 3, line 2700, column 1;
b) Line 2200, column 2 should equal item 2, line 2690, column 1;
c) Line 2200, column 3 should equal item 2, line 2600, column 2.

Item 2.	Total number of scientists and engineers by discipline, sex, and employment status: January 1983						
	S/E DISCIPLINES[1]	HEADCOUNTS					
		TOTAL		MEN		WOMEN	
		Full time	Part time	Full time	Part time	Full time	Part time
		(1)	(2)	(3)	(4)	(5)	(6)
	a. Engineers (total) 2610						
	(1) Aeronautical and astronautical engineers .. 2611						
	(2) Chemical engineers 2612						
	(3) Civil engineers 2613						
	(4) Electrical engineers 2614						
	(5) Mechanical engineers 2615						
	(6) Other engineers 2616						
	b. Physical scientists (total) 2620						
	(1) Astronomers 2621						
	(2) Chemists 2622						
	(3) Physicists 2623						
	(4) Other physical scientists . 2624						
	c. Environ. scientists (total) 2630						
	(1) Atmospheric scientists ... 2631						
	(2) Earth scientists 2632						
	(3) Oceanographers 2633						
	(4) Other environ. sci. 2634						
	d. Mathematical and computer scientists (total) 2640						
	(1) Mathematicians (exclude computer scientists) 2641						
	(2) Computer scientists (exclude programmers) .. 2642						
	e. Life scientists (total) 2650						
	(1) Agricultural scientists 2651						
	(2) Biological scientists 2652						
	(3) Medical scientists (see instructions, p. 4) 2653						
	(4) Other life scientists 2654						
	f. Psychologists (total) 2660						
	g. Social scientists (total) (exclude historians) 2670						
	(1) Economists 2671						
	(2) Political scientists 2672						
	(3) Sociologists 2673						
	(4) Other social scientists 2674						
	h. Total (sum of a thru g) 2600						

PLEASE EXCLUDE from your response any employees in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

[1]See enclosed Crosswalk between NSF's S/E disciplines and the codes in the NCES Classification of Instructional Programs.

Item 3.	Total number of scientists and engineers by discipline, estimated full-time equivalents, and R&D activity: January 1983				
	S/E Disciplines	Total headcounts[1]	Estimated full-time-equivalents (FTE's)		
			Total FTE's[2]	FTE's devoted to separately budgeted R&D[3]	
				Number	Percent (optional)[4]
	a. Engineers (total) 2710				
	(1) Aeronautical and astronautical engineers 2711				%
	(2) Chemical engineers 2712				%
	(3) Civil engineers 2713				%
	(4) Electrical engineers 2714				%
	(5) Mechanical engineers 2715				%
	(6) Other engineers 2716				%
	b. Physical scientists (total) 2620				
	(1) Astronomers 2621				%
	(2) Chemists 2722				%
	(3) Physicists 2723				%
	(4) Other physical scientists 2724				%
	c. Environmental scientists (total) 2730				
	(1) Atmospheric scientists 2731				%
	(2) Earth scientists 2732				%
	(3) Oceanographers 2733				%
	(4) Other environmental scientists 2734				%
	d. Mathematical and computer scientists (total) 2740				
	(1) Mathematicians (exclude computer scientists) 2741				%
	(2) Computer scientists (exclude programmers) 2742				%
	e. Life scientists (total) 2750				
	(1) Agricultural scientists 2751				%
	(2) Biological scientists 2752				%
	(3) Medical scientists (see instructions, p. 4) 2753				%
	(4) Other life scientists 2754				%
	f. Psychologists (total) 2760				
	g. Social scientists (total) (exclude historians) 2770				
	(1) Economists 2771				%
	(2) Political scientists 2772				%
	(3) Sociologists 2773				%
	(4) Other social scientists 2774				%
	h. Total (sum of a thru g) 2700				

[1]Line 2700, column 1, should equal item 1, line 2200, column 1.

[2]Include all activities, e.g., teaching, separately budgeted R&D, etc., of all individuals reported in column 1.

[3]See section 8 in Instructions for definition of "separately budgeted R&D expenditures."

[4]Column 4 has been provided for the convenience of those institutions that estimate the number (column 3) of FTE's devoted to separately budgeted R&D activities by use of a percentage (column 4) in each discipline.

CHECK LIST

( ) 1. Are all entries rounded to whole numbers? Please do not enter fractions or decimals, except in columns 2 and 3 where two decimal places are optional.

( ) 2. Do the data add to subtotals?

( ) 3. Are all columns completed? YOUR estimates will be better than OURS. An explanation of estimates may be noted on a separate sheet or in the REMARKS.

( ) 4. Are all branches and components such as medical school, computer center, agricultural experiment station, and associated research units included?

( ) 5. Have you INCLUDED all postdoctorates?

( ) 6. Have you EXCLUDED graduate students?

1982-83 DATA CHECK

(For your convenience)

Please compare your January 1982 survey response with your survey response for January 1983, particularly for the totals. Please explain below or on a separate sheet any significant changes. Where possible, indicate any required adjustments in data reported in previous years.

	1982	1983
Total full-time scientists and engineers	Line 2600, column 1.	Line 2600, column 1.
Total part-time scientists and engineers	Line 2600, column 2.	Line 2600, column 2.
Total FTE's	Line 2700, column 2.	Line 2700, column 2.
Total FTE's in R&D	Line 2700, column 3.	Line 2700, column 3.

CONFIDENTIALITY

The National Science Foundation recognizes that its ability to gather much of the enclosed information would be severely impaired if it could not be held in confidence. Please indicate below the number of any items that you would not supply unless assured that the source is held confidential. The Foundation will hold in confidence such information to the extent permitted by law.

ITEM:

REMARKS

What methods and source records were used for estimating separately budgeted R&D effort?

Please indicate problems encountered in estimating R&D-related activity.

Please circle the month that your institutional data represent to reflect academic year 1982-83 employment.

1 2 3 4 5 6 7 8 9 10 11 12

Are there any significant changes in data reported in previous years?

How many person-hours were required to complete this form? ☐

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH	NO.	EXT.
NAME OF PERSON WHO PREPARED THIS SUBMISSION (If different from above)	TITLE	AREA CODE	EXCH	NO.	EXT.

NAME OF INSTITUTION	DATE	ADDRESS (number, street, city, State, ZIP code)

NSF FORM 724B (11-82)

OMB No. 3145-0074
Exp. Date: 12/31/83

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING PERSONNEL EMPLOYED AT UNIVERSITIES AND COLLEGES, JANUARY 1983

INSTRUCTIONS AND DEFINITIONS

Introduction

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended in P.L. 507 (42 U.S.C. 1862) (Section 3(a) (6)), and Executive Order 10521 (March 17, 1954). All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

The National Science Foundation requests your cooperation in completing the attached questionnaire covering the characteristics of personnel in your institution as they relate to the sciences and engineering. This form requests employment data in 1982-83 according to institutional recordkeeping coventions. The questionnaire should be completed and returned to NSF by March 15, 1983. If you determine, however, that you will not be able to respond by that date, please notify NSF and request an extension of time.

Where data you report in the current survey differ significantly from those reported in the previous survey, please indicate the reasons for the difference, such as "opening of new medical school," etc., at the end of the questionnaire in the "Remarks" section, or on a separate sheet of paper.

The survey procedures are outlined in flow chart format. (See pp. 5-8.)

If you have any questions regarding information requested on this form, write or telephone Ms. Judith Coakley or Ms. Esther Gist at the Universities and Nonprofit Institutions Studies Group, Division of Science Resources Studies, National Science Foundation, 1800 G Street, N.W., Room L-602, Washington, D.C. 20550 (Telephone: (202) 634-4673.) Additional forms, as well as copies of previous responses, may be obtained by writing to the above address.

Survey Instructions

1. *Survey Population*

This survey, conducted annually, covers professional employment at all academic institutions with a science or engineering (S/E) program. The institutional response to this survey should reflect personnel activity in all branches and other units of the parent institution, including regional campuses, computer centers, medical schools, agricultural experiment stations, and associated research units. If any data for any of these campuses are not included in your response to NSF, please indicate this under "Remarks" when submitting your questionnaire.

Federally funded research and development centers (FFRDC's) are to report their data separately from the administering university; see the listing of FFRDC's administered by academic institutions (p. 3.)

2. *Survey Time Period*

The January date referenced in this questionnaire reflects the midpoint of the 1982-83 academic year rather than the actual reporting date of data to be compiled for NSF. Data reported on this survey are to reflect a "snapshot" of S/E personnel employed at a fixed time during the 1982-83 academic year. For institutions reporting on the basis of central record systems, data should reflect the date when your files are "frozen" for annual personnel reports. Many institutions, especially those with State affiliation, use their central records compiled in the preceding fall of each year to report to NSF. You may want to report as of the payroll period closest to October 1, 1982, which is the basis for the Equal Employment Opportunity Commission's survey of higher education staff (EEO-6, Form 221). Please indicate the reporting month used by your institution in the space provided in the "Remarks" section.

3. *Professional Employment*

The term "professional," for purposes of this survey, refers to all persons paid a salary or stipend by the responding institution who work at a level at which the knowledge acquired by academic training equal to a bachelor's degree in science or engineering is essential in the performance of duties. Many institutions with central reporting systems use headcounts of exempt employees, i.e., those employees who are in the exempt category of the Fair Labor Standards Act as amended. Exempt employees are not eligible for overtime payment. Others use EEO-6 concepts.

Include: S/E personnel with faculty status, postdoctorates,[1] and other professional employees such as systems analysts in computer centers.

Exclude: (1) Personnel on sabbatical or other leave status even if these personnel continue to be paid by your institution; (2) personnel employed in branches of your institution located in foreign countries; (3) unpaid voluntary staff; (4) persons "unpaid" by the university but paid by the medical school; (5) student health service personnel; (6) those agricultural extension personnel primarily involved in home economics and 4-H youth programs; (7) administrative officers above the level of department chairpersons with titles such as president, academic dean, dean of faculty, provost, chancellor, etc., even though they may devote part of their time to teaching and/or research; (8) all graduate students.

[1]Some institutions without comprehensive central records on the number of postdoctorates base their response to this survey on data gathered in the office of the graduate dean as part of NSF's Survey of Graduate Science and Engineering Students and Postdoctorates.

4. *Assignment of Scientists and Engineers to NSF Disciplines*

Determination of whether professional employees should be reported in the NSF personnel survey as "scientists and engineers" and their associated disciplines is done by most respondents on the basis of departmental structures. After particular departments are selected for inclusion in the NSF personnel survey, respondents usually classify headcounts of all professional employees into various S/E disciplines according to their primary or home department of assignment. Where individual assignments are split into two departments on a 50-percent basis, classification into a single NSF discipline should be made according to institutional conventions.

See the classification of Disciplines of Employment in the Sciences and Engineering, for the broad and detailed S/E disciplines of employment corresponding to those shown on the questionnaire, with illustrative categories of each discipline (pages 3 and 4.) Also, for those that use the NCES instructional program categories, see the enclosed "Crosswalk" between NSF's S/E fields and the codes in the NCES Classifications of Instructional Programs (NCES 81-323). Please note that education, law, humanities, music, the arts, physical education, and library science are not considered S/E disciplines for the purpose of this survey. This discipline-oriented taxonomy is used by institutions that compile their own departmental groupings for this NSF survey. While most respondents report S/E headcounts based on departmental structures, NSF recognizes that because of the multidisciplinary nature of many academic activities, degree specialties and departmental assignments may differ (e.g., a Ph.D. in mechanical engineering may be assigned to the department of orthopedics.) To promote ease of reporting and consistency of data among institutions, it is suggested that where these differences are not significant, all professionals in the department be assigned to a single discipline. In other instances, where sizable differences occur, institutional respondents may choose to report professionals employed in a single department into two or more disciplines. For example, an institution may have a single department of electrical engineering and computer science and report individuals into two separate disciplines on the NSF personnel survey according to their degree specialties.

It is important that respondents *include* in the survey scientists and engineers who are appointed to organizational units that are not part of *any* academic department. For example, scientists and engineers employed at a computer center that is not affiliated with a particular academic department should be *included* in the survey. In a similar manner an economist in a nonscience department should be reported. The most prevalent reporting practice for these nonacademic units is to assign groups of individuals to NSF disciplines according to their degree specialties, especially when multidisciplinary activities are prominent.

5. *Medical and Clinical Disciplines*

For purposes of this survey, all M.D.'s, D.D.S.'s, etc., *with faculty or academic appointments* are to be reported, including postdoctorates. NSF considers faculty status given to physicians, dentists, public health specialists, pharmacists, etc., to be an indicator of significant involvement in teaching, clinical investigation, or other R&D activities.

Exclude: (1) All medical practitioners, such as nurse anesthetists, occupational therapists, physical therapists, interns; (2) scientists or engineers whose primary employment is at independent hospitals even though they may perform some teaching or research functions for your institution through cooperative agreements; (3) unpaid voluntary staff at medical or dental schools; and (4) medical residents unless research training under the supervision of a senior mentor is the prime purpose of the appointment.

6. *Questionnaire Item 1, Highest Earned Degree and Headcounts*

a. Highest earned degree information is most commonly available in personnel, payroll, or budget files. Most academic institutions have a computerized system for updating highest earned degree data for professionals. If these files at your institution do not contain degree data, however, these data may be estimated using departmental records.

For purposes of this survey, earned degrees are classified in four categories:

(1) Under "Doctorate Degree" include earned degrees carrying the title of Doctor, e.g., Ph.D., D. Eng., D.E.S., etc; include individuals holding both the Ph.D. degree and any other doctorate degree.

(2) Under "First-Professional Degree" include individuals whose highest earned degrees, e.g., M.D., D.D.S., D.V.M., etc., are first-professional medical degrees that represent the completion of the academic requirements based on programs that require at least 2 academic years of previous college work for entrance and require a total of at least 6 academic years of college work for completion. Specifically include in line 2b first-professional degrees in Medicine (M.D.), Dentistry (D.D.S. or D.M.D.), Veterinary Medicine (D.V.M.), Podiatric Medicine (D.P.M.) and Osteopathic Medicine (D.O.). Individuals holding both the Ph.D. degree and a first-professional degree such as the M.D., should be included in line 2a as mentioned in (1) above.

(3) Under "Master's Degree" include earned degrees carrying the title of Master that are above the bachelor's degree and are other-than-doctorate or first-professional degrees reported in lines 2a and 2b.

(4) Under "Bachelor's degree or the equivalent" include all individuals who have successfully completed a baccalaureate program of studies, usually requiring at least 4 years (or equivalent) of full-time college level study. For the purpose of this survey, 5-year bachelor's degree holders may be included in this category, as well as those who are considered to have the equivalent in experience, even if they have not earned such as degree.

b. *Headcounts*

(1) *Full-time* employees are those individuals available for full-time assignments at the date used for reporting in this survey, or those who are designated as "full time" in an official contract, appointment, or agreement. Determination of "full-time" designation should be based on institutional recordkeeping conventions and standards. Avoid double counting; if, for example, individuals are full-time employees but their assignments involve more than one department or campus, they should be counted as one full-time employee according to their primary or home department of assignment (or campus).

(2) *Part-time* employees are those individuals who work for a length of time in a day, week, etc., defined by your institution as part-time employment.

7. *Questionnaire Item 2, Sex of Full- and Part-time Scientists and Engineers*

Item 2 collects data on the sex of full- and part-time scientists and engineers, characteristics which are usually available in central records. Computer programs used to respond to other requests for employment data on women may often be modified to provide specialized information on scientists and engineers.

8. *Questionnaire Item 3, Full-Time-Equivalents (FTE's)*

a. The FTE reporting concept should reflect the actual utilization of S/E professionals in various disciplines and their involvement in separately budgeted R&D activities. While headcounts are usually reported on the basis of *primary* department of assignment, FTE reporting in various NSF disciplines should reflect multiple appointments. **For example, an individual with a 60-percent appointment in electrical engineering and a 40-percent appointment in computer science would be reported in FTE's in two NSF disciplines according to the 60-40 percent split in departmental assignments.** Accordingly, the FTE concept converts the number of persons with part-time or split appointments among various disciplines or activities to an equivalent number of full-time persons, in accordance with institutionally agreed upon conventions. The number of FTE's reported in column 2 of item 3 should be equal to or greater than the number of full-time employees in any given field, using decimals (proportion of 1.00) for part-time employees. Therefore, the number of FTE's would be equal to or less than the total headcount in any field, and equal to or greater than the number of full-time employees.

The procedures used to compile FTE data vary from institution to institution, depending largely on the records available. Generally, there are two categories of records available to institutions—budgeting information describing the allocation of personnel resources and/or data reflecting actual rather than planned utilization of the resources.

In converting S/E headcounts into FTE's, the following method is suggested:

(1) Categorize headcounts of all exempt employees in S/E departments, medical schools, agricultural experiment stations, research institutes, and other institutional organizational units into one of the NSF disciplines according to primary assignment;

(2) Within each discipline, differentiate employees as being either full time or part time (according to institutional practices);

(3) Calculate the full-time equivalents of full-time S/E personnel. Use budgetary or resource utilization records to report S/E employees with split appointments between departments and/or institutional units, and distribute these data according to appropriate NSF disciplines.

(4) Calculate the full-time equivalents of part-time S/E personnel and merge them into appropriate NSF disciplines.

b. *Full-Time-Equivalents in Research and Development (R&D)*

For purposes of this survey, report only the full-time-equivalent involvement of persons engaged in *separately budgeted research and development.*

R&D activities are systematic, intensive studies directed toward fuller knowledge of the subject studied. R&D is the same as "organized research" as defined in OMB Circular A-21 revised, July 23, 1982. It includes all R&D activities of an institution that are *separately budgeted and accounted for.* R&D includes both "sponsored research" activities (sponsored by Federal or non-Federal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).

Exclude: Time spent by professional employees on departmental research that is not separately budgeted, training grants, public service grants, demonstration projects, etc.

Estimating the division of time allocated or spent by individuals in separately budgeted R&D programs is difficult for many institutions. Again, procedures used to supply these data vary among institutions and the extent to which central reporting is feasible depends, by and large, on the degree to which budget/personnel/financial records are mechanized and linked. Among the procedures used by various institutions are the following:

(1) Using some generally held criteria at the institutional or departmental levels (i.e., three-fourths for instruction, one-fourth for research);

(2) Estimating separately budgeted R&D involvement or assignment obtained from payroll records, personnel records, or from employee contracts (i.e., salaries paid from separately budgeted R&D funds may be compared with total academic salaries of individuals);

(3) Asking research administrators, department chairpersons, or heads of other organizational units to furnish estimates of separately budgeted R&D involvement.

(4) Using faculty activity analyses in institutions where these are regularly conducted, and differentiating separately budgeted R&D activity from departmental research activity.

Federally Funded Research and Development Centers (FFRDC's)

For purposes of this survey, FFRDC's are defined as R&D organizations exclusively or substantially financed by the Federal Government and administered on a contractual basis by educational institutions or other organizations. The following is a current list of FFRDC's administered by universities and colleges:

Ames Laboratory
Argonne National Laboratory
Brookhaven National Laboratory
Center for Naval Analyses
Cerro Tololo Inter-American Observatory
E. O. Lawrence Berkeley Laboratory
E. O. Lawrence Livermore Laboratory
Fermi National Accelerator Laboratory
Jet Propulsion Laboratory
Kitt Peak National Observatory
Lincoln Laboratory
Los Alamos Scientific Laboratory
National Astronomy and Ionosphere Center
National Center for Atmospheric Research
National Radio Astronomy Observatory
Oak Ridge Institute of Nuclear Studies
Plasma Physics Laboratory
Sacramento Peak Observatory
Stanford Linear Accelerator Center

Classification of disciplines of Employment in the Sciences and Engineering. Illustrative subfields include:

ENGINEERING

Aeronautical & Astronomical: aerodynamics, aerospace, space technology.

Chemical: ceramic, petroleum, petroleum refining process.

Civil: architectural, hydraulic, hydrologic, marine, sanitary and environmental, structural, transportation.

Electrical: communication, electronic, power.

Mechanical: engineering mechanics.

Other Engineering: agricultural, industrial and management, metallurgical and materials, mining, nuclear, ocean engineering systems, textile, welding.

PHYSICAL SCIENCES

Astronomy: laboratory astrophysics, optical astronomy, radio astronomy, theoretical astrophysics, X-ray, gamma-ray, neutrino astronomy.

Chemistry: analytical, inorganic, organo-metallic, organic, pharmaceutical, physical, polymer science (exclude biochemistry).

Physics: acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma.

Other Physical Sciences: used for multidisciplinary fields within physical sciences.

ENVIRONMENTAL SCIENCES (TERRESTRIAL AND EXTRATERRESTRIAL)

Atmospheric Sciences: aeronomy, solar, weather modification, extraterrestrial atmospheres, meteorology.

Earth Sciences: engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology.

Oceanography: biological oceanography, chemical oceanography, geological oceanography, physical oceanography, marine geophysics.

Other Environmental Sciences: used for multidisciplinary fields within environmental sciences.

MATHEMATICAL AND COMPUTER SCIENCES

Mathematics: algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology.

Computer Sciences: computer programming,[2] computer and information sciences (general), design, development, and application of computer capabilities to data storage and manipulation, information sciences and systems, systems analysis.

LIFE SCIENCES

Agricultural Sciences: agronomy, animal science, dairy science, food science and technology, forestry, horticulture, poultry science.

[2]Personnel employed as computer programmers should not be reported as professionals.

Biological Sciences: anatomy, bacteriology, biochemistry, biogeography, biophysics, ecology, embryology, entomology, evolutionary biology, genetics, immunology, microbiology, nutrition and metabolism, parasitology, pathology, pharmacology, physical anthropology, physiology, plant sciences, radiobiology, systematics, zoology, veterinary biology.

Medical Sciences: internal medicine, neurology, ophthalmology, preventive medicine and public health, psychiatry, radiology, surgery, veterinary medicine,[3] dentistry, pharmacy, podiatry, anesthesiology, chemotherapy, dermatology, geriatrics, nuclear medicine, obstetrics, gynecology, oncology, pediatrics, physical medicine and rehabilitation.

Other Life Sciences: all other health-related disciplines.[4]

PSYCHOLOGY

Psychology: animal behavior, clinical psychology, comparative psychology, counseling, and guidance, development and personality, educational, personnel, vocational psychology and testing, experimental psychology, ethology, industrial and engineering psychology, social psychology.

SOCIAL SCIENCES

Economics: econometrics and economics statistics, history of economic thought, international economics, industrial, labor and agricultural economics, macroeconomics, microeconomics, public finance and fiscal policy, theory, economic systems and development.

Political Science: regional studies, comparative government, history of political ideas, international relations and law, national, political and legal systems, political theory, public administration.

Sociology: comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and social welfare, sociology theory.

Other Social Sciences: cultural anthropology, criminology, history of science, linguistics, socioeconomic geography, urban studies.

[3]Institutions with schools of veterinary medicine should distribute professionals among the appropriate disciplines (agricultural, biological, and medical) rather than report all personnel as medical scientists.

[4]*Exclude* personnel primarily involved in direct patient care.

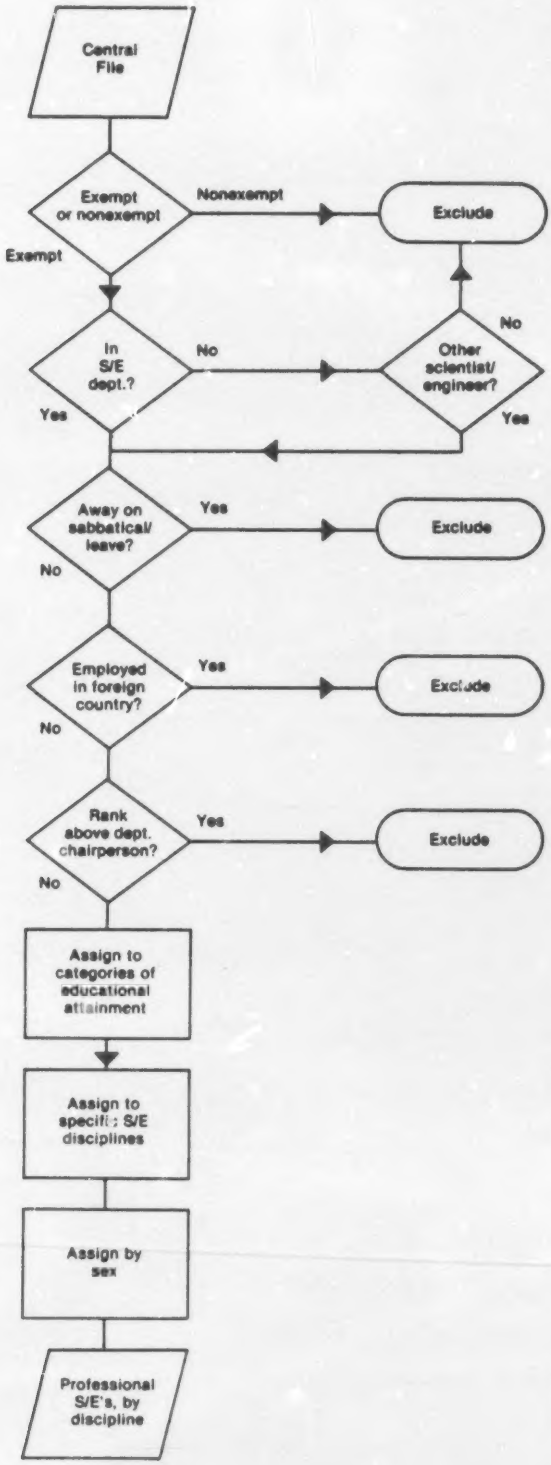
NOTE: See enclosed NSF Crosswalk between NSF field of S/E codes and the NCES Classification of Instructional Programs.

Flow Charts

Institutions that automate NSF survey data or plan to—or even engage in manual data processing—may be assisted by these charts.

STEP 1:

Retrieve, sort, and select information from central records of institution.



Central File: Contains centralized records for all paid employees. (*Note:* Some affiliated entities such as medical schools may have their own central files. See below.) Examples: Personnel, payroll, or general financial records.

Select personnel exempt from Fair Labor Standards Act. (See section 3 in Instructions.)

Select scientists and engineers (include postdoctorates) by "home" department. Exception: if "home" department is not science or engineering, and person holds joint appointment in S/E department.

See section 3 in Instructions.

See section 3 in Instructions.

See section 3 in Instructions.

See section 6 in Instructions.

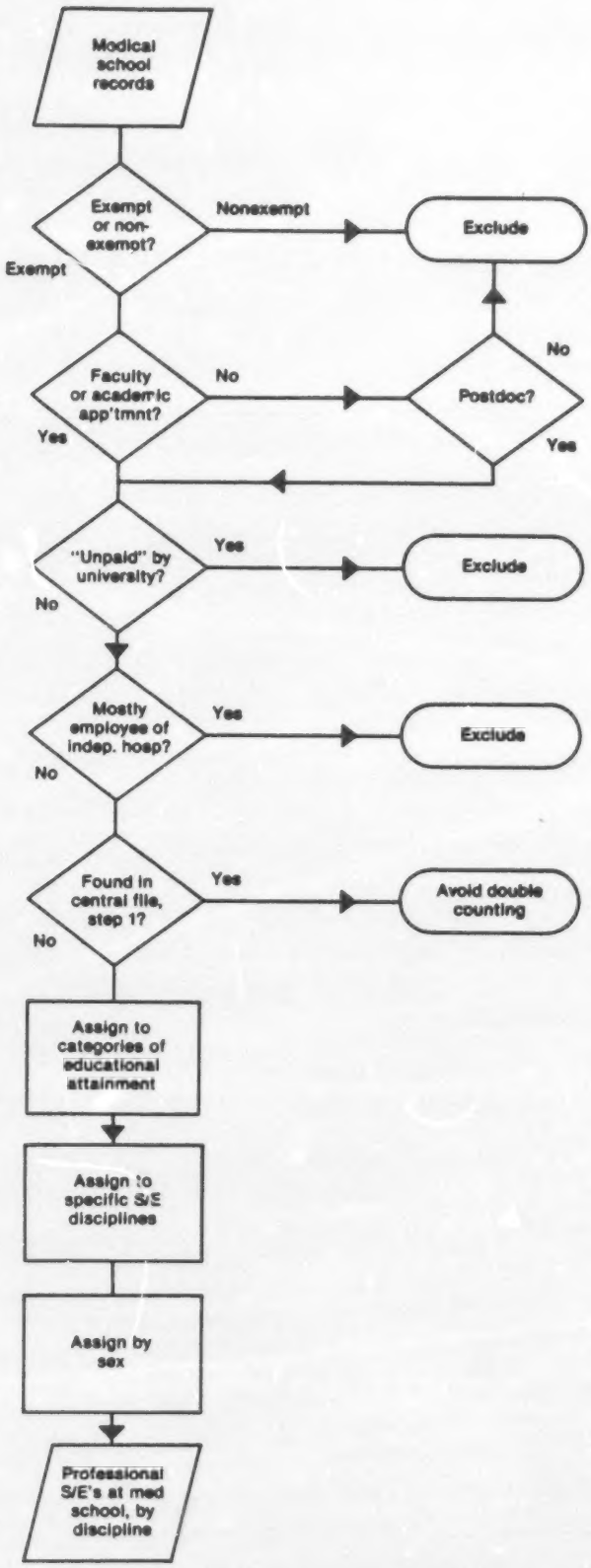
Assign to appropriate disciplines.

See section 7 in Instructions.

At this point you have extracted file containing all professional scientists and engineers covered by central records (but may be limited to those assigned to academic S/E departments in the institution proper).

STEP 2:

Collect information for medical school (if any) if not covered by central file of institution.



Refer to discussion of medical schools (section 5 in Instructions).

Select personnel exempt from Fair Labor Standards Act. (See section 3 in Instructions.)

Do not include medical school personnel unless they have faculty or academic appointments. Exceptions: postdoctorates. (See section 5 in Instructions.)

Exclude personnel "unpaid" by the university even if paid by the medical school. Exclude voluntary staff.

Scientists whose primary employment is at independent hospitals are to be excluded even if they perform teaching/research for your institution through cooperative agreements.

Some individuals may be included in both the institution's central records and the medical school records. Count such persons only once, but keep track of split assignments for FTE figures, below.

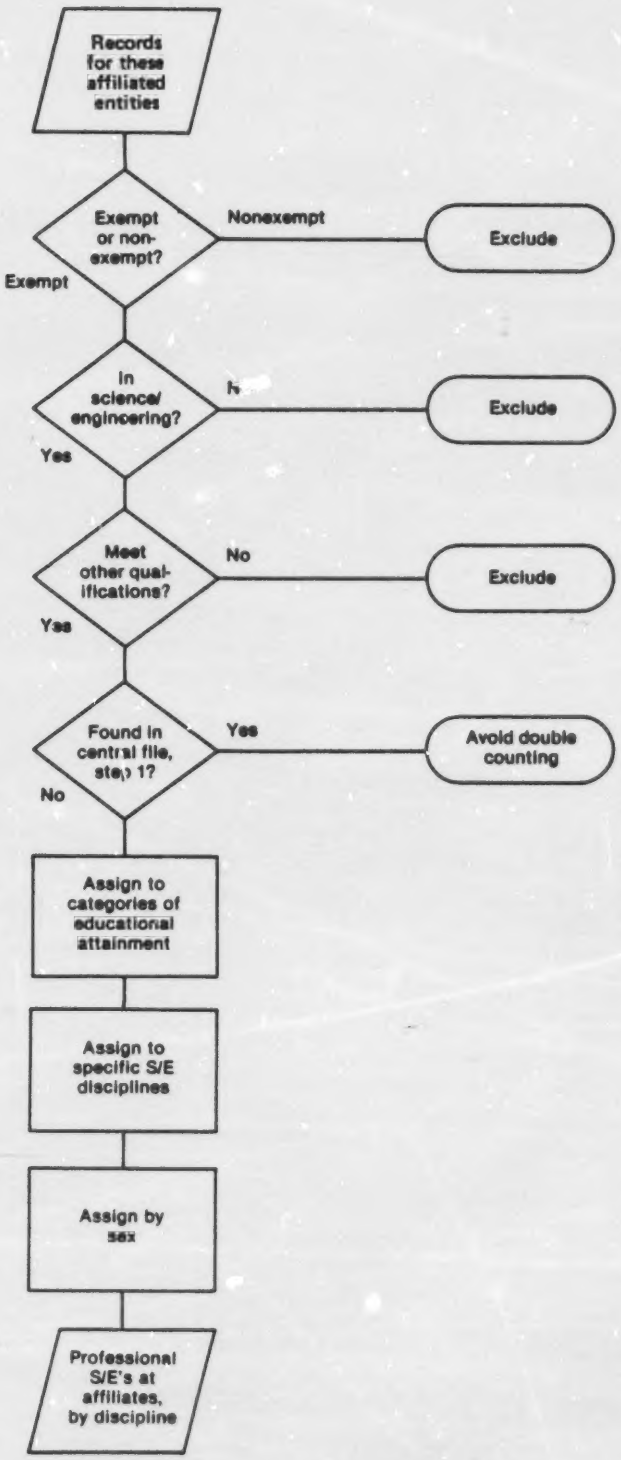
(See section 6 in Instructions.

Assign to appropriate disciplines.

See section 7 in Instructions.

STEP 3:

Collect information on any remaining affiliated entities not covered by files already processed. Such entities might include a regional campus, a computer center, an agricultural experiment station or an associated research unit (except for FFRDC's), etc. Also check for postdoctorates not included in central files (see footnote to section 3 in Instructions.)



{See section 1 in Instructions.

{Select personnel exempt from Fair Labor Standards Act. (See section 3 in Instructions.)

{See discussions in sections 3 and 4 in Instructions.

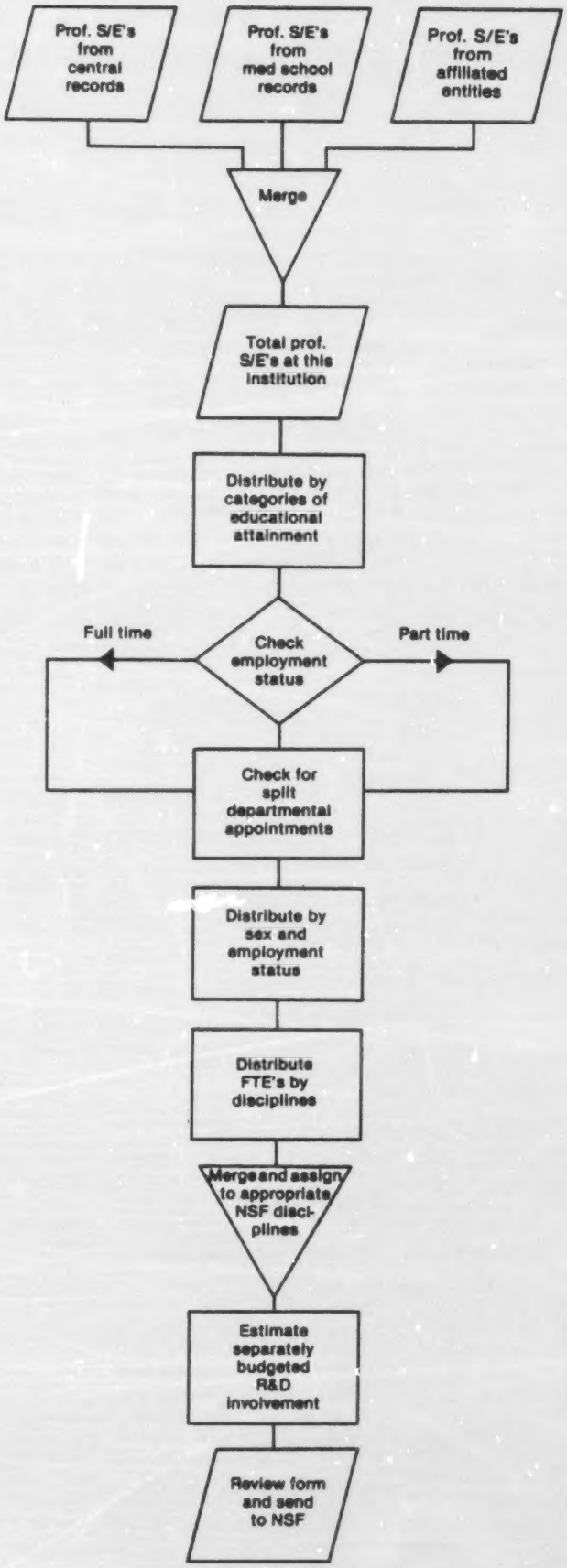
{Note exclusions listed in section 3 in Instructions (e.g., exclude personnel away on sabbatical and voluntary staff.)

{Some individuals may be included in both the institution's central records and the affiliated entity's files (e.g., a person teaching at both the main and a regional campus). Only count such persons once, but keep track of split assignments for FTE figures, below.

{See section 6 in Instructions.

{Assign to appropriate disciplines.

{See section 7 in Instructions.


Prof. S/E's from central records
Prof. S/E's from med school records
Prof. S/E's from affiliated entities
Merge
Total prof. S/E's at this institution
Distribute by categories of educational attainment
Full time
Check employment status
Part time
Check for split departmental appointments
Distribute by sex and employment status
Distribute FTE's by disciplines
Merge and assign to appropriate NSF disciplines
Estimate separately budgeted R&D involvement
Review form and send to NSF

STEP 4:

Merge all extracted information, compute full-time-equivalents in each discipline for both full-time and part-time personnel, and determine extent of separately budgeted R&D involvement.

If duplicate entries have not already been eliminated, it may be convenient to do so at this stage.

Data required for item 1 have now been collected.

Use institutional definition for "part-time" employees. (See also discussion of "full time" in section 6 in Instructions.)

FULL TIME: Check for personnel assignments which are split across several disciplines. (See section 8 in Instructions.)

PART TIME: Use institutional conventions or practices to convert numbers of part-time personnel to the equivalent number of full-time individuals in each discipline. (See section 8 in Instructions.)

Data required for item 2 have now been collected.

For all personnel, determine the proportion of time spent in separately budgeted R&D programs. Use institution's conventions or data from faculty activity analyses, salaries paid from research funds, etc. (See section 8 in Instructions.)

Data required for item 3 have now been collected.

CROSSWALK BETWEEN NSF FIELD OF SCIENCE/ENGINEERING CODES AND THE NCES CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

SAMPLE LISTING:

Last 2 digits of line code on NSF questionnaire → 33

NSF Field Description: OCEANOGRAPHY

NCES Codes	NCES Field Description	
26.0607	MARINE BIOLOGY	NCES fields which are included within the preceding NSF category
40.0702	OCEANOGRAPHY	

10 ENGINEERING, TOTAL

11 AEROSPACE
- 14.02 AEROSPACE, AERONAUTICAL, AND ASTRONAUTICAL ENGINEERING

12 CHEMICAL
- 03.0406 PULP AND PAPER PRODUCTION
- 03.0509 WOOD SCIENCE
- 14.07 CHEMICAL ENGINEERING
- 14.25 PETROLEUM ENGINEERING

13 CIVIL
- 04.02 ARCHITECTURE
- 14.04 ARCHITECTURAL ENGINEERING
- 14.08 CIVIL ENGINEERING
- 14.14 ENVIRONMENTAL HEALTH ENGINEERING

14 ELECTRICAL
- 14.09 COMPUTER ENGINEERING
- 14.10 ELECTRICAL, ELECTRONICS, AND COMMUNICATIONS ENGINEERING

15 MECHANICAL
- 14.11 ENGINEERING MECHANICS
- 14.19 MECHANICAL ENGINEERING

16 OTHER ENGINEERING
- 14.01 ENGINEERING, GENERAL
- 14.03 AGRICULTURAL ENGINEERING
- 14.05 BIOENGINEERING AND BIOMEDICAL ENGINEERING
- 14.06 CERAMIC ENGINEERING
- 14.12 ENGINEERING PHYSICS
- 14.13 ENGINEERING SCIENCE
- 14.15 GEOLOGICAL ENGINEERING
- 14.16 GEOPHYSICAL ENGINEERING
- 14.17 INDUSTRIAL ENGINEERING
- 14.18 MATERIALS ENGINEERING
- 14.20 METALLURGICAL ENGINEERING
- 14.21 MINING AND MINERAL ENGINEERING
- 14.22 NAVAL ARCHITECTURE & MARINE ENGINEERING
- 14.23 NUCLEAR ENGINEERING
- 14.24 OCEAN ENGINEERING
- 14.27 SYSTEMS ENGINEERING
- 14.28 TEXTILE ENGINEERING
- 14.99 ENGINEERING, OTHER
- 19.0901 TEXTILE AND CLOTHING
- 30.03 ENGINEERING & OTHER DISCIPLINES
- 30.06 SYSTEMS SCIENCE
- 40.0701 METALLURGY

20 PHYSICAL SCIENCES, TOTAL

21 ASTRONOMY
- 40.02 ASTRONOMY
- 40.03 ASTROPHYSICS
- 40.09 PLANETARY SCIENCE

22 CHEMISTRY
- 40.05 CHEMISTRY

23 PHYSICS
- 40.08 PHYSICS

24 OTHER PHYSICAL SCIENCES
- 40.0799 MISCELLANEOUS PHYSICAL SCIENCE, OTHER
- 40.01 PHYSICAL SCIENCES, GENERAL
- 40.99 PHYSICAL SCIENCES, OTHER

30 ENVIRONMENTAL SCIENCES, TOTAL

31 ATMOSPHERIC
- 40.04 ATMOSPHERIC SCIENCE & METEOROLOGY

32 EARTH
- 40.06 GEOLOGICAL SCIENCES

33 OCEANOGRAPHY
- 26.0607 MARINE BIOLOGY
- 40.0702 OCEANOGRAPHY

34 OTHER ENVIRONMENTAL SCIENCES

40 MATHEMATICAL SCIENCES, TOTAL

41 MATHEMATICS
- 06.1302 OPERATIONS RESEARCH (QUANTITATIVE METHODS)
- 27 MATHEMATICS

42 COMPUTER SCIENCE
- 06.12 MANAGEMENT INFORMATION SYSTEMS
- 11 COMPUTER & INFORMATION SCIENCE, GENERAL

49 MATHEMATICAL SCIENCE, OTHER

50 LIFE SCIENCES, TOTAL

51 AGRICULTURAL
- 01.03 AGRICULTURAL PRODUCTION
- 01.0303 AQUACULTURE
- 01.07 INTERNATIONAL AGRICULTURE
- 02 AGRICULTURAL SCIENCES
- 03 RENEWABLE NATURAL RESOURCES
- 04.06 LANDSCAPE ARCHITECTURE

52 BIOLOGICAL

18.0201	CLINICAL ANATOMY
18.0202	CLINICAL BIOCHEMISTRY
18.0203	CLINICAL MICROBIOLOGY
18.0204	CLINICAL PATHOLOGY
18.0205	PHYSIOLOGY
18.06	EPIDEMIOLOGY
18.1002	ALLERGIES AND ENDOMOLOGY
18.1009	IMMUNOLOGY
18.1018	PATHOLOGY
18.23	TOXICOLOGY (CLINICAL)
19.05	FOOD SCIENCE & HUMAN NUTRITION
20.0108	FOOD AND NUTRITION
26.0302	BACTERIOLOGY
26.0601	ANATOMY
26.0602	BIOMETRICS AND BIOSTATISTICS
26.0603	ECOLOGY
26.0604	EMBRYOLOGY
26.0606	HISTOLOGY
26.0609	NUTRITIONAL SCIENCES
26.0610	PARASITOLOGY
26.0612	TOXICOLOGY
26.0699	MISCELLANEOUS SPECIALIZED AREAS/ LIFE SCIENCE/OTHER
26.0701	ZOOLOGY
26.0702	ENTOMOLOGY
26.0703	GENETICS, HUMAN AND ANIMAL
26.0704	PATHOLOGY, HUMAN AND ANIMAL
26.0705	PHARMACOLOGY, HUMAN AND ANIMAL
26.0706	PHYSIOLOGY, HUMAN AND ANIMAL
26.0799	ZOOLOGY, OTHER
26.01	BIOLOGY, GENERAL
26.02	BIOCHEMISTRY AND BIOPHYSICS
26.03	BOTANY
26.04	CELL AND MOLECULAR BIOLOGY
26.05	MICROBIOLOGY
42.14	PSYCHOPHARMACOLOGY
26.99	LIFE SCIENCES, OTHER

53 MEDICAL

18.0299	BASIC CLINICAL HEALTH SCIENCES, OTHER
18.04	DENTISTRY
18.08	HEMATOLOGY
18.1001	MEDICINE, GENERAL
18.1003	ANESTHESIOLOGY
18.1004	COLON AND RECTAL SURGERY
18.1005	DERMATOLOGY
18.1007	FAMILY PRACTICE
18.1008	GERIATRICS
18.1010	INTERNAL MEDICINE
18.1011	NEUROLOGICAL SURGERY
18.1012	NUCLEAR MEDICINE
18.1013	OBSTETRICS AND GYNECOLOGY
18.1014	OPHTHALMOLOGY
18.1015	ORTHODONTIC SURGERY
18.1016	ORTHOPEDIC
18.1017	OTORHINOLARYNGOLOGY/ OTOLARYNGOLOGY
18.1019	PEDIATRICS
18.1020	PHYSICAL MEDICINE & REHABILITATION
18.1021	PLASTIC SURGERY
18.1022	PREVENTIVE MEDICINE
18.1023	PSYCHIATRY
18.1024	NEUROLOGY
18.1025	RADIOLOGY
18.1026	SURGERY
18.1027	THORACIC SURGERY
18.1028	UROLOGY
18.1099	MEDICINE, OTHER
18.1106	PSYCHIATRY/MENTAL HEALTH
18.12	OPTOMETRY
18.13	OSTEOPATHIC MEDICINE
18.14	PHARMACY
18.15	PODIATRY
18.24	VETERINARY MEDICINE
20.0102	CHILD DEVELOPMENT CARE AND GUIDANCE
26.0605	ENDOCRINOLOGY
26.0608	NEUROSCIENCES
26.0611	RADIOBIOLOGY

54 OTHER LIFE SCIENCES

17.0807	OCCUPATIONAL THERAPY
17.0813	PHYSICAL THERAPY
17.0821	SPEECH-LANGUAGE PATH/AUDIOLOGY
17.0899	REHABILITATION SERVICES, OTHER
17.99	ALLIED HEALTH, OTHER
18.01	AUDIOLOGY AND SPEECH PATHOLOGY
18.07	HEALTH SCIENCES ADMINISTRATION
18.09	MEDICAL LABORATORY
18.11	NURSING
18.22	PUBLIC HEALTH LABORATORY SCIENCE
18.99	HEALTH SCIENCES, OTHER

60 PSYCHOLOGY

13.06	SCHOOL PSYCHOLOGY
17.0801	ART THERAPY
42	PSYCHOLOGY

70 SOCIAL SCIENCES, TOTAL

71 ECONOMICS

01.0103	AGRICULTURAL ECONOMICS
06.05	BUSINESS ECONOMICS
45.06	ECONOMICS

72 POLITICAL SCIENCE

44.01	PUBLIC AFFAIRS, GENERAL
44.03	INTERNATIONAL PUBLIC SERVICE
44.04	PUBLIC ADMINISTRATION
44.99	PUBLIC AFFAIRS, GENERAL
44.05	PUBLIC POLICY STUDIES
45.09	INTERNATIONAL RELATIONS
45.10	POLITICAL SCIENCE & GOVERNMENT

73 SOCIOLOGY

18.16	POPULATION & FAMILY PLANNING
45.05	DEMOGRAPHY
45.11	SOCIOLOGY

74 OTHER SOCIAL SCIENCES

04.03	CITY, COMMUNITY & REG/PLANNING
05	AREAS AND ETHNIC STUDIES
06.06	HUMAN RESOURCES DEVELOPMENT
06.15	ORGANIZATIONAL BEHAVIOR
14.26	SURVEYING & MAPPING SCIENCES
42.12	PSYCHOLINGUISTICS
43.01	CRIMINAL JUSTICE
44.02	COMMUNITY SERVICES
44.07	SOCIAL WORK
45.01	SOCIAL SCIENCES, GENERAL
45.02	ANTHROPOLOGY
45.03	ARCHEOLOGY
45.04	CRIMINOLOGY
45.07	GEOGRAPHY
45.12	URBAN STUDIES
45.99	SOCIAL SCIENCES, OTHER

other science resources publications

Science Resources Studies Highlights

	NSF No.	Price
R&D Funds		
"Real Growth in Federal R&D Funds Estimated at 12% in 1984—Largest Increase Since Midsixties"	84-302	-----
Dollar Value of U.S. R&D Expenditures Overseas Declined in 1982"	83-329	-----
"Companies Plan Increases in R&D Spending Through 1984"	83-327	-----
Defense, General Science, and Transportation Functions Lead 1984 Federal R&D Growth"	83-323	-----
Defense and Economy Major Factors in 7% Real Growth in National R&D Expenditures in 1984"	83-316	-----
Company and Federal Support Produce 17% Industrial R&D Spending Increase in 1981	83-313	-----
S/E Personnel		
Industry Reports Shortages of Scientists and Engineers Down Substantially From 1982 to 1983"	84-303	-----
1982 Doctorate Production Stable in Science and Engineering Fields, But Down in Science and Mathematics Education	83-330	-----
No Change in Science and Engineering Student Quality Seen by 60% of Academic Officials: At Least 25% Perceive Improvement"	83-322	-----
Technical Employment Growth Accelerates in Selected Nonmanufacturing Industries"	83-321	-----
Growth in Neuroscience May Be Leveling Off"	83-314	-----
Projected Employment Scenarios Show Possible Shortages in Some Engineering and Computer Specialties"	83-307	-----
Manufacturing Employment Becoming Increasingly More Technological"	83-303	-----
Growth in Science and Engineering Employment Accelerated in 1980 to 1981—But Demand May Have Slackened in 1982"	83-300	-----
Growth in Employment of Science and Engineering Doctorates Continues, Led by Computer Scientists"	82-328	-----
"Growth in Scientific and Engineering Employment Slows Between 1978-80"	82-303	-----

Detailed Statistical Tables

	NSF No.	Price
R&D Funds		
Research and Development in Industry, 1981. Funds, 1981; Scientists and Engineers, January 1982	83-325	-----
Federal Funds for Research and Development, Fiscal Years 1982, 1983, and 1984, Volume XXXII	83-319	-----
S/E Personnel		
Scientists, Engineers, and Technicians in Manufacturing and Nonmanufacturing Industries: 1980-81	83-324	In press
Characteristics of Doctoral Scientists and Engineers in the United States: 1981	82-332	-----
U.S. Scientists and Engineers: 1980	82-314	-----
Characteristics of Recent Science/Engineering Graduates: 1980	82-313	-----

Reports

	NSF No.	Price
R&D Funds		
Trends to 1982 in Industrial Basic Research	83-302	$3.50
Federal R&D Funding for Energy: Fiscal Years 1971-83	83-301	-----
1990 R&D Funding Projections	81-315	$3.50
S/E Personnel		
Projected Response of the Science, Engineering, and Technical Labor Market to Defense and Nondefense Needs: 1982-84	84-304	In press
Women and Minorities in Science and Engineering	84-300	-----
Science and Engineering Degrees: 1950-80, A Source Book	82-307	$5.00
Composite		
National Patterns of Science and Technology Resources: 1984	84-311	In press
Science and Technology Data Book	83-318	-----
Science and Engineering Personnel: A National Overview	82-318	$5.00

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